Department for Work & Pensions

GOVERNMENT SOCIAL RESEARCH

Social Science in Government

Greater Manchester Working Well

Early impact assessment

January 2018

Research Report No 946

A report of research carried out by the Learning and Work Institute on behalf of the Department for Work and Pensions

This document/publication is also available on our website at:
https://www.gov.uk/government/organisations/department-for-work-pensions/about/research#research-publications

If you would like to know more about DWP research, please email:
Socialresearch@dwp.gsi.gov.uk

First published January 2018.

ISBN 978 1 911003 72 4

Summary

The Learning and Work Institute (L&W), is an independent think-tank, policy and research organisation dedicated to lifelong learning, full employment and inclusion. L&W researches what works, develops new ways of thinking and implements new approaches. Working with partners, L&W transforms people's experience of learning and employment. What L&W does benefits individuals, families, communities and the wider economy.

L&W strives for a fair society in which learning and work helps people realise their ambitions and potential throughout life, and improve people's experiences of learning and employment.

Contents

List of tables

List of figures

Acknowledgements

We would like to thank Richard Ward, Stefania Porcu and Rickson Gunzo of the Department for Work and Pensions for their advice, support, and comments throughout the course of this research project.

The Authors

This report was produced by Duncan Melville, Paul Bivand, Carmen Hoya Quecedo, Lovedeep Vaid and Alex McCallum of the Learning and Work Institute.

List of abbreviations

BAME	Black and minority ethnic
DWP	Department for Work and Pensions
ESA	Employment and Support Allowance
FSF	Flexible Support Fund
GMCA	Greater Manchester Combined Authority
HMRC	Her Majesty's Revenue and Customs
ICD	International Classification of Diseases
ILO	International Labour Organisation
IS	Income Support
JSA	Jobseeker's Allowance
LMS	Labour Market System
ONS	Office for National Statistics
PAYE	Pay As You Earn
PSM	Propensity Score Matching
PWPS	Post Work Programme Support
RCT	Randomised Control Trial
TTWA	Travel to Work Area
WCA	Work Capability Assessment
WPLS	Work and Pensions Longitudinal Study
WRAG	Work Related Activity Group
WW	Working Well
ZINB	Zero Inflated Negative Binomial

Executive summary

Introduction

The purpose of this research project was to undertake an early stage impact assessment of the Working Well (WW) pilot programme. The pilot programme operates in Greater Manchester to help long-term benefit claimants with health conditions to move into and stay in work. All participants on the pilot are claimants of Employment and Support Allowance (ESA) in the Work Related Activity Group (WRAG), who have completed the two-year maximum time individuals can spend on the Work Programme.

This evaluation investigates whether the WW pilot programme is more effective at helping those it supports to move off benefits and into work compared to the alternative Jobcentre Plus business as usual provision.

The pilot commenced in March 2014 and took referrals up to March 2016[1]. Since clients can receive up to two years of support in finding a job and up to one year of in-work support, the 'final' cohort of starters will not all complete the programme until March 2019.

This impact assessment only covers cohorts from the first year and a half of the pilot programme, tracking participants who joined the programme up until August 2015, and at most only tracking outcomes for the earliest cohorts (the first joiners) for 52 weeks and most for only 26 weeks: a quarter of the time they could spend on the programme.

Thus, this evaluation can only provide an impact assessment of the early stages of the programme. Since the programme was designed to tackle long-term employment barriers, this early assessment cannot be used to infer the performance of the programme as a whole. Outcomes observed over a longer period might show a different picture to the ones observed in this early assessment.

This report includes:

- a description of the WW pilot programme.
- a description of the data used, including how we constructed the comparison group with similar personal characteristics and prior labour market histories to those of the WW participants.
- an assessment of how effective the matching process has been in reducing the differences in characteristics between the participants and the final matched comparison group.
- an initial comparison of the labour market outcomes for participants in WW against a matched comparison group based on descriptive statistics.

---

1 From March 2016, WW moved into an expansion phase from 5,000 to up to 50,000 individuals from a much wider range of out-of-work benefit claimants. For more information, please see the 2014 Greater Manchester Devolution Agreement, https://www.gov.uk/government/publications/devolution-to-the-greater-manchester-combined-authority-and-transition-to-a-directly-elected-mayor.

- an impact assessment based on regression analysis follows, looking at the impact of the pilot on benefit receipt, weeks off benefit, job entry, job sustainment and weeks in work. This is followed by a regression analysis disaggregated at provider level.
- finally, we draw out the conclusions that emerge from our research.

This report complements the evaluation work undertaken by SQW on behalf of the Greater Manchester Combined Authority (GMCA)[2].

Programme descriptions and policy context

All participants on the WW pilot programme are claimants of Employment and Support Allowance (ESA) in the Work Related Activity Group (WRAG). ESA is a benefit for people who are unable to work due to illness or disability. Individuals in the ESA WRAG group are required to undertake work-related activities. This is because they are expected to be capable of work at some point in the future. These work-related activities do not include looking or applying for work.

All participants in WW will have spent two years on the Work Programme. Participants in the Work Programme who failed to sustain employment return to Jobcentre Plus after completing two years on the programme. At this point, Jobcentre Plus refers ESA WRAG claimants in Greater Manchester to Working Well.

The pilot was designed to cover 5,000 referrals from March 2014. Up to the end of the referral period in March 2016, 4,985 claimants had been referred to WW and 4,548 had attached and started the programme[3]. This report, as an early impact assessment, covers 2,658 claimants referred to the pilot up to August 2015, 53 per cent of known referrals.

Two providers, Ingeus and Big Life, delivered the WW pilot programme in Greater Manchester. Big Life in three local authorities (41 per cent of referrals): Manchester, Salford and Trafford, and Ingeus in the other seven local authorities (59 per cent of referrals) within Greater Manchester: Bolton, Bury, Oldham, Rochdale, Stockport, Tameside, and Wigan.

The aim of WW is to help its participants, who are long-term recipients of out-of-work benefits, move into work, and to sustain that work. Each participant in WW has a key worker for two years, as a point of contact and coordinator for the support they need. Key workers' caseloads are kept low, at around 60 clients per key worker, so that they can provide focused, intensive and bespoke support to all their clients. A personalised action plan is developed for each WW participant, and a bespoke package of support is then created in response. This package of support is tailored to each individual's needs, and is sequenced appropriately. The type of support that is offered through WW is wide ranging and can include, for example, support with regard to skills, employment, health issues and housing problems. This support can be provided directly by the participant's key worker and/or the provider's specialist advisers, or through referral to other service providers. Clients are long-term workless and often enter WW with a range of problems, for example, health issues,

---

2 See SQW, Evaluation of Working Well Programme. Interim Report, A Report for the Greater Manchester March 2015 (not available on line) and SQW, 2016 Working Well Annual Report, Evaluation of Working Well Programme, Interim Report, June 2016. https://www.greatermanchester-ca.gov.uk/downloads/file/215/working_well_annual_report_2016

3 Ultimately around 4,640 individuals will have participated in the programme.

substance abuse problems, debt problems or housing needs. The approach is to seek to address these problems before moving on to help the client focus on employment. Once a participant has moved into work, key workers provide in-work support to help them sustain employment for at least 12 months.

Participants' wide-ranging needs have also driven the integration of services. All ten Greater Manchester local authorities have drawn up a Local Integration Plan for WW, setting out the organisations and services that would be involved and the arrangements for their involvement. Since each local authority has different organisational arrangements for delivering services these plans vary across the ten local authorities.

In addition to participants in WW being long-term workless and often having complex and multiple needs, there is also the challenge of operating in the relatively difficult local labour market conditions pertaining in Greater Manchester. In the 2014 and 2015 period for which we have data on WW participants, Greater Manchester had a lower working-age employment rate, a higher unemployment rate and a higher working-age economic inactivity rate than the UK as a whole. A position on all three of these indicators which it inherited from the preceding decade.

Methodology

The WW pilot programme was not designed as a Randomised Controlled Trial (RCT). Hence, in order to evaluate its effectiveness, we needed to construct a comparison group to compare outcomes for its participants, the treated group, against this comparison group. This comparison group needed to have as similar as possible personal characteristics and prior labour market histories (time in work and on out-of-work benefits) to that of the pilot programme participants. Then the differences in outcomes for participants compared to this comparison group can be taken as an indication of the impact of participation on WW rather than possibly being due to differences in characteristics, or experiences of the two groups.

This process of constructing a comparison group which is as similar as possible to the pilot programme participants is known as matching. In order to achieve this matching a method known as Propensity Score Matching (PSM) was used. This approach matches each participant against a similar individual or set of individuals from an initial wider group of potential comparators. A statistical measure of distance between each participant and potential comparators is calculated. Distance here is an overall measure of how dissimilar two individuals are on a range of relevant personal characteristics and prior labour market history. Participants are then matched with the individual or individuals from the potential comparison group who are closest in distance to them, i.e. are most similar to them.

The result of this PSM approach should be that the only relevant difference between participants and the matched comparison group is that participants have received services available under WW while the comparison group have not. In fact, this matching exercise was successful and statistical tests indicated no systematic differences between our treated and matched comparison group.

It should be noted that only variables relating to periods before participation in WW are included in the PSM approach, as variables for periods after participation in WW has started may have been affected by this participation.

One limitation of the PSM approach is the lack of data on some variables which are likely to influence an individual's labour market outcomes. In the case of WW, no information was available on the qualifications held or previous occupations of participants or potential comparators. These are variables that might well influence an individual's ability to obtain and retain employment/move off and stay off out-of-work benefits. This problem is, at least partly, addressed by our matching of participants and comparators on their previous employment and benefit histories. This ensures that participants and those they are compared with have similar prior labour market experiences, which reduces the chances of there being systematic differences between them. This is because if there were such differences between the two groups, which impacted on labour market outcomes, then we would expect to see these differences also in their prior labour market history.

First, we undertook an initial comparison of the work and off out-of-work benefits outcomes for WW participants and the final matched comparison group. Up to and including periods of at least 26 weeks off benefit, a slightly higher percentage of the matched comparison group spent time off benefits compared to the treated group. For period of 39 and 52 weeks off benefit, there was no difference between the treated and comparison groups. Five per cent of both WW participants and the final matched comparison group entered work. On job sustainment, WW participants, had slightly higher rates of job sustainment for 13 and 26 weeks compared to the matched comparison group. For 39 and 52-week job sustainment, the outcomes are very similar for the treated and matched comparison groups.

Caution should be exercised in interpreting these comparisons as reflecting the effects of WW, as we did not match participants and the final matched comparison group on the basis of them coming from local areas with similar labour market or neighbourhood conditions. On average, the matched comparison group came from areas which had higher employment rates than the treated group from Greater Manchester. This is likely to have boosted both the off benefit and into work rates of the final matched comparison group relative to the treated group of WW participants.

Having created the matched comparison group for the WW participants we merged these two datasets together and ran a number of regressions analyses of the early impact of participation in WW (or being treated) on various measures of job and off out-of-work benefit outcomes. We undertook this regression analysis in addition to the above matching for two reasons:

- Including a range of potential explanatory variables, in addition to a dummy variable to pick up the influence of being treated, or participation in WW, provided a further check that the estimated treatment effects were not biased by the influence of other factors.
- Including the relevant lower level local authority employment rate and the local median hourly earnings for full-time workers to control for the impact of local labour market and, or local neighbourhood effects on off benefit and work outcomes.

Findings

The results of our regression analyses are summarised in Table 1.1, which shows the estimated early impact of participation in WW on various job and benefit receipt outcomes.

Table 1.1 Early impact of participation in Working Well on job and off benefit outcomes

Outcome	Sign	Significance level
Job entry	+	Not significant
Job sustained for 13 weeks	+	Not significant
Job sustained for 26 weeks	+	5%
Off benefit for any period	-	Not significant
Off benefit for one week	-	Not significant
Off benefit for 13 weeks	-	Not significant
Off benefit for 26 weeks	-	Not significant
Off benefit for 39 weeks	-	Not significant
Off benefit for 52 weeks	+	Not significant

The first column in Table 1.1 shows the outcome variables that were modelled using the above regression analysis. The second column indicates whether the estimated effect of participation in WW on the outcome variable in question was positive or negative. The last column indicates whether the magnitude of this effect was statistically significantly different from zero and, if it was, the statistical significance level at which this was true. The comparison being assessed here is between participants in WW and our matched comparison group, with account being taken of personal characteristics and local area effects. For example, our regression analysis indicates that participation in WW is estimated to have a positive impact (i.e. increase) on job entry, but that this impact is not found to be statistically significant. In fact, all bar one of our estimated impacts of participation in WW were found not to be statistically significant. The one exception is for 26-week job sustainment. Here we found that participation in WW had a statistically significant and positive impact.

We undertook similar regression analysis separately for the two providers, Big Life and Ingeus. These are summarised in Table 1.2. However, we do not separately identify the two providers in this report – they are simply denoted as Provider A and Provider B. For Provider A, these showed similar results to those for WW as a whole, with participation in the pilot programme not having a significant impact on job or off benefit outcomes. For Provider B participation in WW was found to have a positive and statistically significant impact for job entry (at ten per cent level), 13-week job sustainment (at five per cent level) and for at least one week off out-of-work benefits (at the ten per cent level).

Table 1.2 Early impact of participation in Working Well on job and off benefit outcomes by provider

Outcome	Sign	Significance level
Job entry, Provider A	-	Not significant
Job Entry, Provider B	+	10%
Job sustained for 13 weeks, Provider A	-	Not significant
Job sustained for 13 weeks, Provider B	+	5%
Off benefit for any period, Provider A	-	Not significant
Off benefit for any period, Provider B	+	Not significant
Off benefit for one week, Provider A	+	Not significant
Off benefit for one week, Provider B	+	10%
Off benefit for 13 weeks, Provider A	-	Not significant
Off benefit for 13 weeks, Provider B	-	Not significant
Off benefit for 26 weeks, Provider A	-	Not significant
Off benefit for 26 weeks, Provider B	-	Not significant

We also undertook analyses of WW on weeks in work and weeks off out-of-work benefits. Our analysis suggested that WW increased the amount of time each individual who entered work spent in work by 4.57 weeks compared to an identical individual in the matched comparison group. As WW participants spent on average 20.53 weeks in work this implies that the counterfactual experience if WW had not existed would have been 15.96 weeks in work. However, we found no statistically significant impact from WW on the amount of time an individual spent off out-of-work benefits.

Conclusions

Our impact assessment of WW assessed its early impact on a range of job and off out-of-work benefit outcomes. We investigated the early impact of WW on weeks in work and weeks off out-of-work benefits.

Overall, our analysis of different job outcomes suggests that WW has not increased the chances of individuals moving into work, but has lengthened the time in work for those participants who do enter work when compared against our matched comparison group. We found that the programme increased weeks in work for those who entered work by an additional 4.57 weeks. Consistent with the result above, WW was also found to have a statistically significant, and positive, early impact on being in work for 26 weeks or more. The pilot programme was not found to have a statistically significant impact on any periods spent off out-of-work benefits.

The research we have undertaken is an impact assessment rather than a more comprehensive mixed methods evaluation including a process evaluation. Our impact assessment is able to estimate the impacts of WW, but does not explore why these results are as they are. That is the role of process evaluation, combining qualitative and quantitative research methods.

This means that any explanations that we offer are to a degree speculative. WW participants often have a range of problems such as health issues, substance abuse problems and housing needs. WW seeks to address these problems before moving on to focus on employment. Page 91 of the 2016 Working Well Annual Report produced for GMCA by SQW notes that support for participants is sequenced and that:

> *'Working Well addresses wider barriers to work faced by each client which need to be dealt with in order to ensure clients are confident and employable, with the aim of generating more sustainable work outcomes in the longer term.'*

This approach may delay entry into work in the short run but, hopefully, increases individuals' chances of sustaining this entry into work.

We found no statistically significant impact from the pilot programme on the amount of time spent off out-of-work benefits. Part of the difference between these results for job and off benefit outcomes may be down to permitted work rules whereby ESA claimants can continue to be eligible for ESA while in paid work[4]. The Department for Work and Pensions (DWP) have advised that the markers for permitted work are not robust enough to allow for an analysis of whether periods in work are covered by these rules. Therefore, an increase in permitted work while continuing to claim ESA is a possibility rather than a finding of this research.

We also assessed the early impact of WW separately for its two providers, which are not identified, but simply denoted as Provider A and Provider B. For job outcomes, participation in WW provided by Provider A was not found to have a statistically significant early stage impact. However, for Provider B participation in WW was found to have a positive and statistically significant impact for job entry (at ten per cent level), and for 13-week job sustainment (at five per cent level). For off benefit outcomes, Provider B was found to have a positive and statistically significant impact on spending at least one week off out-of-work benefits (at the ten per cent level). However, Provider B provision was not found to have a statistically significant impact on any other off benefit outcomes and Provider A provision was not found to have a statistically significant impact on any of the off benefit outcomes considered.

The mixed results as to whether Working Well had a significant early stage impact on employment or off benefit outcomes are not unexpected given:

- the composition of its participants who were distanced from the labour market (and, to us, the unexpectedly high rate at which the matched comparison group left out-of-work benefits);
- the bespoke support offered, with potentially learning by doing over time leading to greater effectiveness of this support; and
- the early point of assessment given the programme was intended to tackle deep seated barriers to employment amongst participants.

This research project was also a test of whether the PSM approach could be used to construct a robust impact assessment of the impact of WW on job and off benefit outcomes. This report demonstrates that this was indeed the case.

---

[4] For more details on permitted work rules see: https://www.gov.uk/employment-support-allowance/eligibility

Introduction

1.1 Aim and scope of the report

The overall purpose of this research project was to undertake an early stage impact assessment of the Working Well (WW) pilot programme. The programme operates in Greater Manchester with the aim of helping long-term claimants with health conditions move into and stay in work.

This evaluation investigates whether or not the pilot programme is more effective at helping those it supports move off out-of-work benefits and into work compared to the alternative Jobcentre Plus business as usual provision for ESA (WRAG) claimants. The business as usual provision consists of 88 minutes of work coach support time per year. There is also a discretionary fund – the Flexible Support Fund (FSF) – available to work coaches to provide additional support to any claimant where they deem this to be useful to enable the claimant to enter work.

We only had data for participants starting on WW for around the first year and a half of the programme. Hence, this report cannot offer a final assessment as to the impact of WW. Participants were enrolled on the programme up until March 2016 and will remain on the programme for two years after that. Payments to the two providers for participants who sustain a year in work will be potentially payable up until March 2019. Hence, an assessment of the full impact of the pilot programme will not be possible until later in 2019 once administrative data for the full period of the pilot programme becomes available. At that point, it should be possible to undertake an assessment of its full impact on jobs and off out-of-work benefits.

This research project was also a test of whether a Propensity Score Matching (PSM) methodology could produce a robust impact assessment for an intervention such as WW[5]. The generally preferred method for undertaking impact assessments is to undertake a Randomised Control Trial (RCT). However, it may not be possible to undertake an RCT for various reasons, and so alternative approaches are needed where this is the case.

This report complements the evaluation work undertaken directly by the Greater Manchester Combined Authority (GMCA) and that being done for it by SQW[6].

---

5 Previous evaluations of programmes to support out-of-work disabled and long-term sick individuals have used various methods. The 2013 Pathways to Work evaluation used a matched comparison areas approach (Knight, G., *et al.* (2013), 'Provider-led Pathways to Work: Net impacts on employment and benefits', Department for Work and Pensions Working Paper No. 113. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/221223/WP113.pdf) while the 2007 New Deal for Disabled People used a propensity score matching approach (Stafford, B., *et al.* (2007), "New Deal for Disabled People: Third synthesis report – key findings from the evaluation", Department for Work and Pensions Research Report No. 430. http://www.york.ac.uk/inst/spru/pubs/pdf/rrep430.pdf)

6 See SQW, Evaluation of Working Well Programme. Interim Report, A Report for the Greater Manchester March 2015 (not available on line) and SQW, 2016 Working Well: Evaluation of Working Well Programme Interim Report June 2016.

The rest of this introductory section sets out a description of the WW pilot. The next section looks at data issues: how we identified participants on the pilot, the potential comparison group, and then the matched comparison group. Then a section follows which provides descriptive statistics on the participant group and the unmatched and matched comparison groups. This is followed by an initial assessment of the outcomes of the pilot programme based on descriptive statistics. Then a regression analysis follows looking at the early stage impact of the pilot on benefit receipt, job entry, job sustainment, weeks in work and weeks off out-of-work benefits. This is followed by an assessment of the impact at the provider level. Finally, some conclusions are set out.

1.2 Project description

The WW pilot started in March 2014 in Greater Manchester. It took referrals for two years up until March 2016 and the pilot continues until March 2019 so as to capture all sustained job outcomes (a year in work following participation)[7]. The aim of WW is to help its participants, who are long-term recipients of out-of-work benefits with health conditions, to move into and to sustain that work. All participants on the pilot are claimants of ESA in the WRAG, who have completed the two-year maximum time individuals can spend on the Work Programme. ESA is an out-of-work benefit for people who are currently unable to work due to illness or disability. Individuals in the ESA WRAG are considered to be capable of work at some point in the future and to be capable of taking steps immediately towards moving into work, known as work-related activities. It should be noted that the requirement to undertake work-related activities does not include such individuals having to look and apply for work, just that they are required to undertake activities towards this ultimate destination.

The expectation prior to the start of delivery was that around 5,000 people would participate in WW. Up to June 2016, 4,986 had been referred to the pilot of which 4,684 had been attached. In order to be considered attached, individuals referred to WW must have had their first meeting with their key worker. The WW pilot is part of a wider programme of devolution of powers to the Greater Manchester city region, as established by the 2014 Devolution Agreement between the GMCA and the Government.

Two providers, Ingeus and Big Life, are delivering the WW pilot programme in Greater Manchester. Big Life is delivering the pilot in three local authorities: Manchester, Salford and Trafford. Ingeus is delivering in the other seven local authorities within Greater Manchester: Bolton, Bury, Oldham, Rochdale, Stockport, Tameside, and Wigan. By March 2016, Ingeus had received 59 per cent of the referrals (2,936) and Big Life the remaining 41 per cent (2,049). Attachments with the two providers are: 2,721 (60 per cent) for Ingeus and 1,827 (40 per cent) for Big Life. This report covers 1,646 claimants referred to Ingeus and 1,088 referred to Big Life up to August 2015. The approach to delivery varies between Ingeus and Big Life[8].

---

7 WW was subsequently extended in March 2016. This evaluation report only covers the pilot stage and not this extension.

8 Further details on the approaches taken can be found on pages 38-39 of SQW, *Evaluation of Working Well Programme. Interim Report*, A Report for the Greater Manchester March 2015.

Participants in the Work Programme who failed to sustain employment return to Jobcentre Plus after completing two years on the programme. At this point, Jobcentre Plus refer ESA WRAG claimants in Greater Manchester to WW. Claimants are required, where it is appropriate Work Related Activity in their circumstances, to attend an initial meeting with a WW Key Worker, and so become attached to the programme, the Jobcentre Plus Work Coach can consider sanctioning if claimants do not attend this meeting. Further meetings with their Key Worker are not mandatory. However, key workers can request that a client be mandated to attend subsequent meetings and/or undertake other work-related activities. Engagement between the two WW providers and Jobcentre Plus has been important for building the relationship between them and smoothing the referral process.

All participants in WW will have spent two years on the Work Programme plus between three and 12 months on out-of-work benefits depending on their benefit status prior to Work Programme participation without obtaining sustained employment. In short, all participants will have been long-term workless and are likely to have complex needs and barriers to work which the pilot will need to address if it is to be successful at helping participants move into and stay in work.

These requirements shape the nature of the intervention. Each participant in WW is allocated a key worker for two years, as a point of contact and coordinator for any support they need to help them move into and stay in work. Key workers' caseloads are deliberately kept low, at around 60 clients per key worker, in order to ensure that they can provide focused, intensive and bespoke support to all their clients. A personalised action plan is developed for each WW client, and a bespoke package of support is then created in response. This package of support is tailored to each individual's needs, and is sequenced appropriately. The type of support that is offered through WW is wide ranging and can include, for example, support with regard to skills, employment, health issues and housing problems. This support can be provided directly by the participant's key worker and/or the provider's specialist advisers, or through referral to other service providers. As participants often enter WW with a range of problems, for example, health issues, substance abuse problems, debt problems or housing needs. The approach taken is to try to address these types of problems before moving on to help the client focus on employment. Once a participant has moved into work, key workers provide in work support to help them sustain employment for at least 12 months.

Participants' wide ranging needs has also driven the integration of services. This integration provides the pilot's key workers with access to the range of services needed to assist their clients. All ten local authorities drew up a Local Integration Plan for WW, setting out the organisations and services that would be involved and the arrangements for their involvement. As each local authority has differing organisational arrangements for delivering services these plans vary across the ten local authorities. In order to assist this integration of services to participants, the two providers have sought where possible to either co-locate their key workers alongside relevant council services, or locate them close to these services.

Payments to the two providers were performance based:

- Attachment Fee of £1,440 when the client joins the pilot
- Job Start Fee of £576 when the client enters work
- Outcome Fee of £864 when the client has been in employment for 12 months

Hence, the providers could receive up to £2,880 per client.

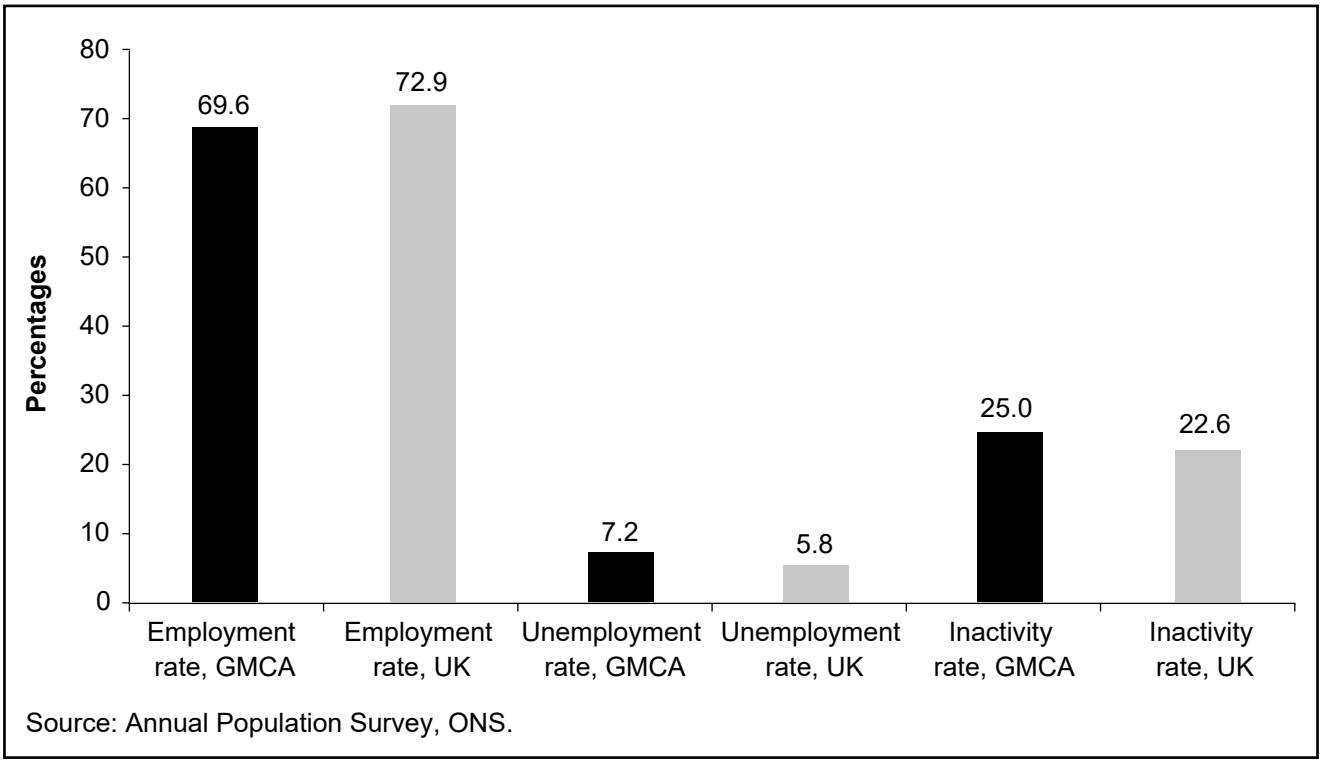
The pilot has two success targets agreed between GMCA and the Department for Work and Pensions (DWP):

- 20 per cent of participants to start a job
- 15 per cent of participants to sustain a job for a year

1.3 Local labour market context

The local labour market within which WW has operated is a relatively difficult one. In 2014 and 2015 combined, the years our study covers, Greater Manchester had a lower working-age employment rate, a higher unemployment rate and a higher working-age economic inactivity rate than the UK overall. This picture of relatively poor labour market outcomes in Greater Manchester is a persistent feature of its labour market since the turn of the century, see Appendix A.

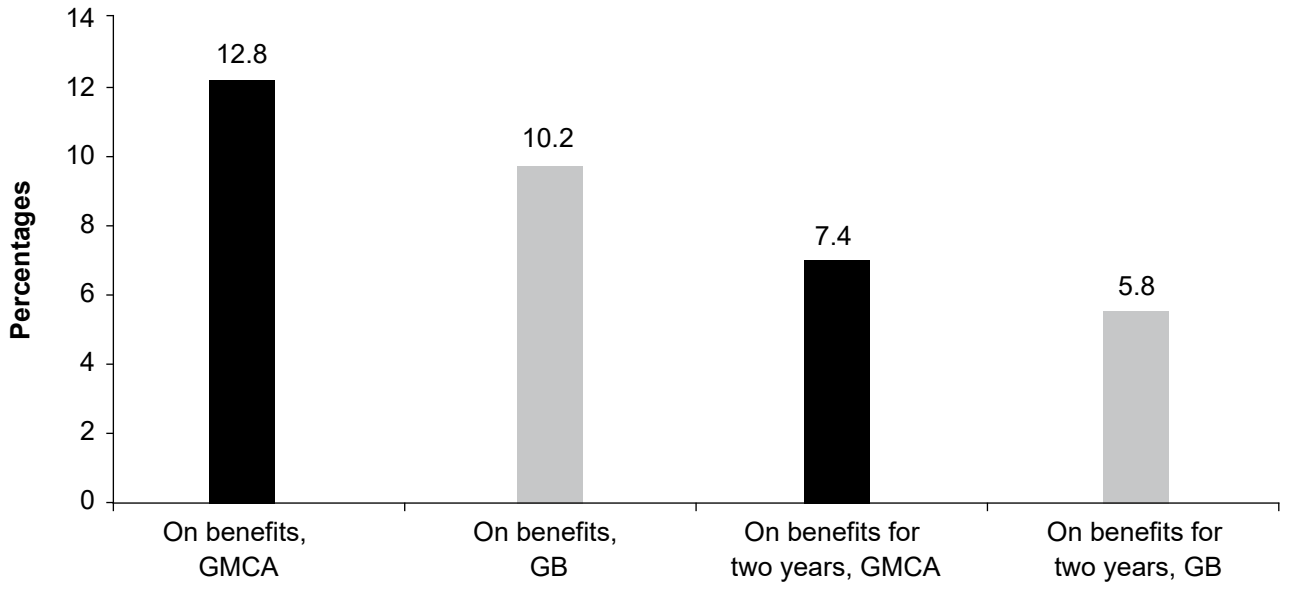
Figure 1.1 Employment, unemployment, and working-age inactivity rates in Greater Manchester and UK, average for 2014 and 2015



Source: Annual Population Survey, ONS.

In 2014 and 2015 combined, Greater Manchester had a higher percentage of its working-age population in receipt of out-of-work benefits and a higher percentage who had been on these benefits for two years or more. Again, this picture is the same for the longer period since 2000, see Appendix A.

Figure 1.2 Percentage of residents of working age on out-of-work benefits and on these benefits for two years or more, Greater Manchester and GB, average for 2014 and 2015

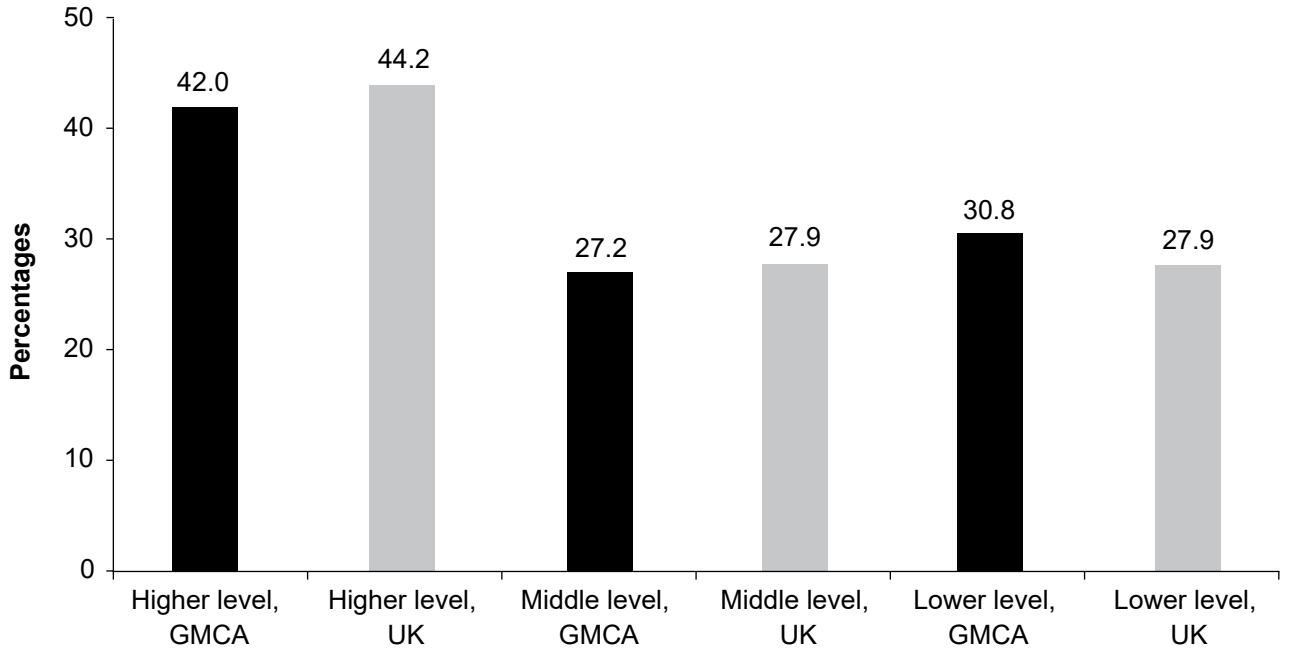


Source: DWP.

The composition of employment in Greater Manchester also differs somewhat from the overall UK picture. In 2014 and 2015 combined, Greater Manchester had a lower percentage of its employed residents in higher-level occupations and a higher percentage in lower level occupations than the UK as a whole[9]. Greater Manchester and the UK as a whole had similar percentages in middle level occupations. The longer-term picture since 2000 is the same as this, see Appendix A.

[9] Higher-level occupations are defined on the basis of SOC 2010 as those in major groups 1-3: Managers, Directors and Senior Officials, Professional Occupations and Associate Professional and Technical Occupations. Middle level occupations are defined as those in major groups 4, 5, and 8: Administrative and Secretarial Occupations, Skilled Trades Occupations and Process, Plant and Machine Operatives. Lower level occupations are defined as those in major groups 6, 7, and 9: Caring, Leisure and Other Service Occupations, Sales and Customer Service Occupations and Elementary Occupations.

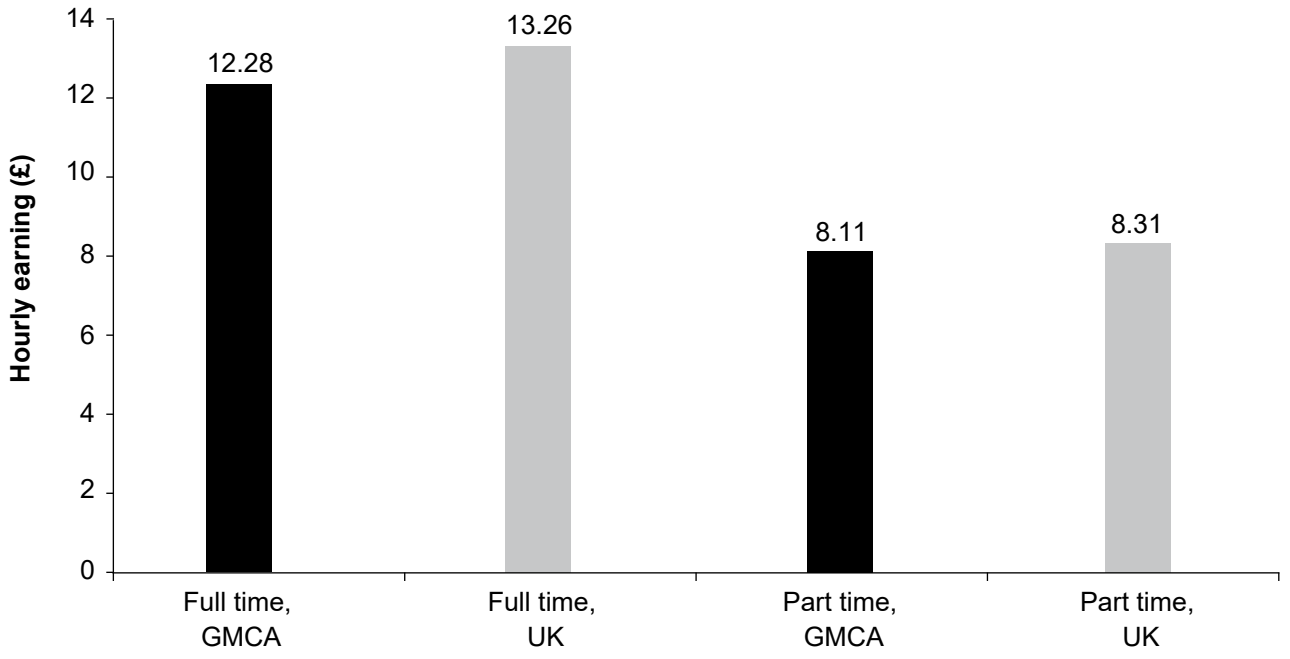
Figure 1.3 Percentage of employment in higher, middle and lower level occupations, Greater Manchester and the UK, average for 2014 and 2015



Source: Annual Population Survey, ONS.

Given these differences in the composition of employment, it is not surprising that in 2014 and 2015 combined median hourly earnings were lower in Greater Manchester than in the UK overall. Again, this is a persistent feature of the last decade and a half.

Figure 1.4 Median gross hourly earnings: Full and part-time workers, Greater Manchester and the UK, average for 2014 and 2015



Source: Annual Survey of Hours and Earnings.

1 Data issues

1.1 Data overview

1.1.1 Introduction

Our analysis, as set out in this report, was undertaken using data provided by the Department for Work and Pensions (DWP). The data used are DWP administrative data on benefit receipt linked to employment information from Her Majesty's Revenue and Customs (HMRC) tax records. The DWP benefits data and HMRC tax record data are linked at individual level. This means that we have information at the individual level on a very large range of personal characteristics, benefit receipt, labour market histories, including movements off out-of-work benefits and movements into work.

Table 2.1 provides an overview of the quantum of data associated with the pilot. The expected number of participants in Working Well (WW) at the pre-operational planning stage was 5,000 Employment and Support Allowance (ESA) Work Related Activity Group (WRAG) claimants. Up to March 2016 (when referrals ended), 4,985 individuals had been referred and mandated to attend an initial meeting with a WW key worker. Once someone had attended this initial meeting then they were considered to be attached to the programme. Up to March 2016, 4,548 individuals had been attached to the programme in this way (91 per cent of referrals). We received data on participants in late 2015, so our data on participants (treated group) does not cover all 4,548 attached participants. We have data on 2,658 participants who were referred to WW between March 2014 and August 2015[10]. Our final matched comparison group of 2,614 includes people with similar characteristics, benefit receipt and work histories. As WW only operates in Greater Manchester, individuals with similar characteristics and labour market histories to its participants not resident in Greater Manchester (and thus not able to go on the pilot programme) can be used to create a comparison group for an analysis of the impact of WW. The details of how this was done are set out in the rest of this report. We had data on this comparison group for the period January 2014 to July 2015[11].

---

10 As discussed later in our report, this means that our impact assessment is only of the early stages of the programme and not the programme over its whole lifetime. Outcomes observed over a longer period might show a different picture to the ones observed in our early assessment.

11 The periods we have data for the treated and matched comparison groups differ slightly. We used a nearest neighbour matching procedure so, while these periods were matched on, some differences remain, with difference on this factor being traded off against reducing differences on other factors matched on. This was done in order to minimise the overall difference between the treated and matched comparison groups.

Table 1.1 Overview of the Greater Manchester Working Well pilot data

Category	Numbers	Provider (areas of operation)		Time Period
Overall programme (Management information GMCA, SQW)	**Greater Manchester**	**Big Life (Manchester Salford, Trafford)**	**Ingeus (Bolton, Bury, Oldham, Rochdale, Stockport, Tameside, Wigan)**	
Expected number of participants (pre-programme)	5,000			March 2014 to March 2016 (referral period)
Actual referrals to pilot up to March 2016	4,985	2,049	2,936	March 2014 to March 2016
Participants attached up to March 2016	4,548	1,827	2,721	March 2014 to March 2016
Data used in this study (DWP data, L&W analysis)				
Number in treated group	2,658	1,088[12]	1,646	March 2014 to August 2015 (referral period)
Number in final matched comparison group	2,614	1,088[13]	1,646	January 2014 to August 2015
Total number included in analysis	5,272	2,176	3,292	January 2014 to August 2015

Source: GMCA, SQW, DWP, L&W.

The data that DWP supplied provided information on jobs, with the latest date for a job ending being 31 August 2015. This is the end point for our analysis of jobs, with all job spells at 31 August 2015 being counted up to that point only. This means that only a small percentage of the treated and comparison groups could possibly have had 52 or 65 weeks in work, even if they started work within the first month of starting WW (or equivalent). Table 2.2 shows the maximum number of weeks in work or off benefit that we could possibly have identified. This shows that the data available for analysis declines with time, especially from 26 weeks onwards.

12 As the areas were identified by the local authority code for individuals, the 80 WW participants (with a DWP marker as WW) not coded to a Greater Manchester local authority have been included for both providers, and are therefore included within each analysis. This is why the provider participants total a larger number than the overall number.

13 As the comparison groups were separately constructed for each area from the total available for comparison, it is possible that the same individuals would occur in each comparison dataset. Therefore, the numbers available exactly match the WW participant groups, while the matching process produced slightly smaller numbers for the overall study.

Table 1.2 Maximum numbers who could be observed reaching selected durations

	Outcomes (weeks off benefit)			Outcomes (weeks in work)		
	Matched Comparison	Working Well	Total	Matched Comparison	Working Well	Total
Any off-benefit or in-work period	2,614	2,658	5,272	2,614	2,658	5,272
13	2,614	2,658	5,272	2,502	2,037	4,539
26	2,502	2,037	4,539	1,551	1,509	3,060
39	1,551	1,509	3,060	868	946	1,814
52	868	946	1,814	530	577	1,107
65	613	668	1,281	344	378	722

1.1.2 Data sources and linking

The DWP data are from the Work and Pensions Longitudinal Study (WPLS). This is a set of datasets including DWP's National Benefits Database, HMRC P45 data supplied to DWP and a range of other DWP datasets (detailed below) including the Labour Market System (LMS) pilot marker dataset, which includes information on programme participation and ESA Work Capability Assessment (WCA) analytical dataset. Each dataset is linked together using unique identifiers. The unique identifiers are derived from the National Insurance number and provided to us in encrypted form. This preserves the anonymity of the individuals that this data covers.

The treated group was identified using the DWP's LMS pilot marker dataset. If a claimant started on WW, their work advisor set pilot start date marker on the Jobcentre Plus LMS. Hence, DWP data was used rather than management information from the Greater Manchester Combined Authority (GMCA) or from the providers.

The comparison group was assembled from two datasets. These are the Work Programme Analytical Dataset, which includes records of Work Programme completions and return to Jobcentre Plus, and the DWP LMS pilot marker dataset, which contains pilot markers set by Jobcentre Plus work coaches which record if ESA Work Programme returners were receiving post-Work Programme support.

The information on personal characteristics was taken from a combination of the National Benefits Database, Jobcentre Plus' Labour Market System, and the ESA WCA analytical dataset.

Benefit histories and outcomes were taken from the National Benefits Database, and covered all out-of-work benefits for the period from four years prior to completion of the Work Programme. Employment histories and outcomes were taken from the HMRC P45 dataset held by DWP, and covered employment histories for the period from four years prior to completion of the Work Programme.

All the information from both DWP and from HMRC is on the basis of 'spells'[14], so each DWP record consists of a single spell on a single benefit. Individual people, over the course of the period the data covers, can have multiple spells, so the spells data has been aggregated to obtain days and weeks on or off out-of-work benefits, and in work.

1.2 Defining the comparison group

As the WW pilot programme was not designed as a Randomised Controlled Trial (RCT), we needed to construct a treated group (sometimes termed the action group) and a comparison group. This comparison group needed to have as similar as possible personal characteristics and prior labour market histories to that of the pilot programme participants. Then the differences in outcomes for participants compared to this comparison group can be taken as an indication of the impact of participation on WW rather than possibly being due to differences in characteristics, or experiences of the two groups. Comparisons between the two groups' off benefit and into work outcomes can then be used to isolate any impact from the pilot programme.

All participants are ESA WRAG claimants at the point of referral to WW who have spent two years on the Work Programme and are not in employment at the end of their time on the Work Programme. This is also true for the comparison group. All participants are resident in Greater Manchester as eligibility for the pilot is geographically restricted to cover just this area. The comparison group, both before and after matching, could potentially be resident anywhere within Great Britain outside of Greater Manchester.

DWP provided us with data on around 40,000 individuals who were all ESA WRAG at the point they were referred to the Work Programme. These were the initial candidates for the matched comparison group against which to compare participants in WW.

These 40,000 comparison candidates were selected by DWP, and were limited to this number in order to control and limit the transfer of sensitive personal data to the smallest volume necessary to support the production of a robust impact assessment. Each comparison candidate had a date identified as the 'Programme date' which was the equivalent to the referral date for WW participants[15].

---

[14] A 'spell' is a single period of eligibility for a benefit, or, for HMRC, a single employment with a single employer. For example, a claimant who is on ESA and then is re-assessed as Fit for Work and claims Jobseeker's Allowance (JSA) has two separate spells on out-of-work benefits. If an individual is on ESA and then finds work, but then subsequently returns to ESA, then they will have two separate DWP benefit spells and one HMRC work spell. Therefore, there are potentially multiple records per individual, and the data matching process has involved identifying the overall numbers of days on or off benefits, and in or not in work, for all the relevant individuals.

[15] For the 20,000 supplied from the 'Post Work Programme Support' (PWPS) dataset, this was the actual date of their Post-Work Programme interview with Jobcentre Plus. However, these markers were not present in all cases. Therefore, DWP supplied information on an additional 20,000 Work Programme ESA leavers from the Work Programme analytical dataset who had no PWPS record.

1.2.1 Propensity Score Matching

Propensity Score Matching (PSM) was utilised to construct the matched comparison groups from the 40,000 initial candidates. This approach matches each participant against a similar individual or set of individuals from an initial wider group of potential comparators. A statistical measure of distance between each participant and potential comparators is calculated. Distance here is an overall measure of how dissimilar two individuals are on the range of relevant personal characteristics and prior labour market history. Participants are then matched with the individual or individuals from the potential comparison group who are closest in distance to them, i.e. are most similar to them.

It should be noted that only variables relating to periods before participation in WW are included in the PSM approach, as variables for periods after participation in WW has started may have been affected by this participation.

We identified, from the initial candidate dataset, a matched comparison group using 'Nearest Neighbour' matching to identify those people whose labour market histories and characteristics were most similar to those of the WW participants. 'Nearest Neighbour' matching has the advantage of using all the actual participants and not rejecting any who only have weaker matches, so no data is lost[16].

Data matching can only be done on the basis of observed factors. Hence, it is not possible to rule out that a matched comparison group may have unobservable differences from WW participants that make them more or less likely to move off out-of-work benefits or into work than WW participants. This potential source of bias can be at least partially addressed by matching participants and a non-participant comparison group on their previous labour market histories, as we did as part of the second stage of matching. This ensures that participants and those they are compared with have similar prior labour market experiences, which reduces the chances of there being relevant unobservable differences between them. This is because if there were such unobservable differences between the two groups, which affected labour market outcomes, then we would expect to see differences in their prior work history[17].

1.2.2 Two-stage matching process

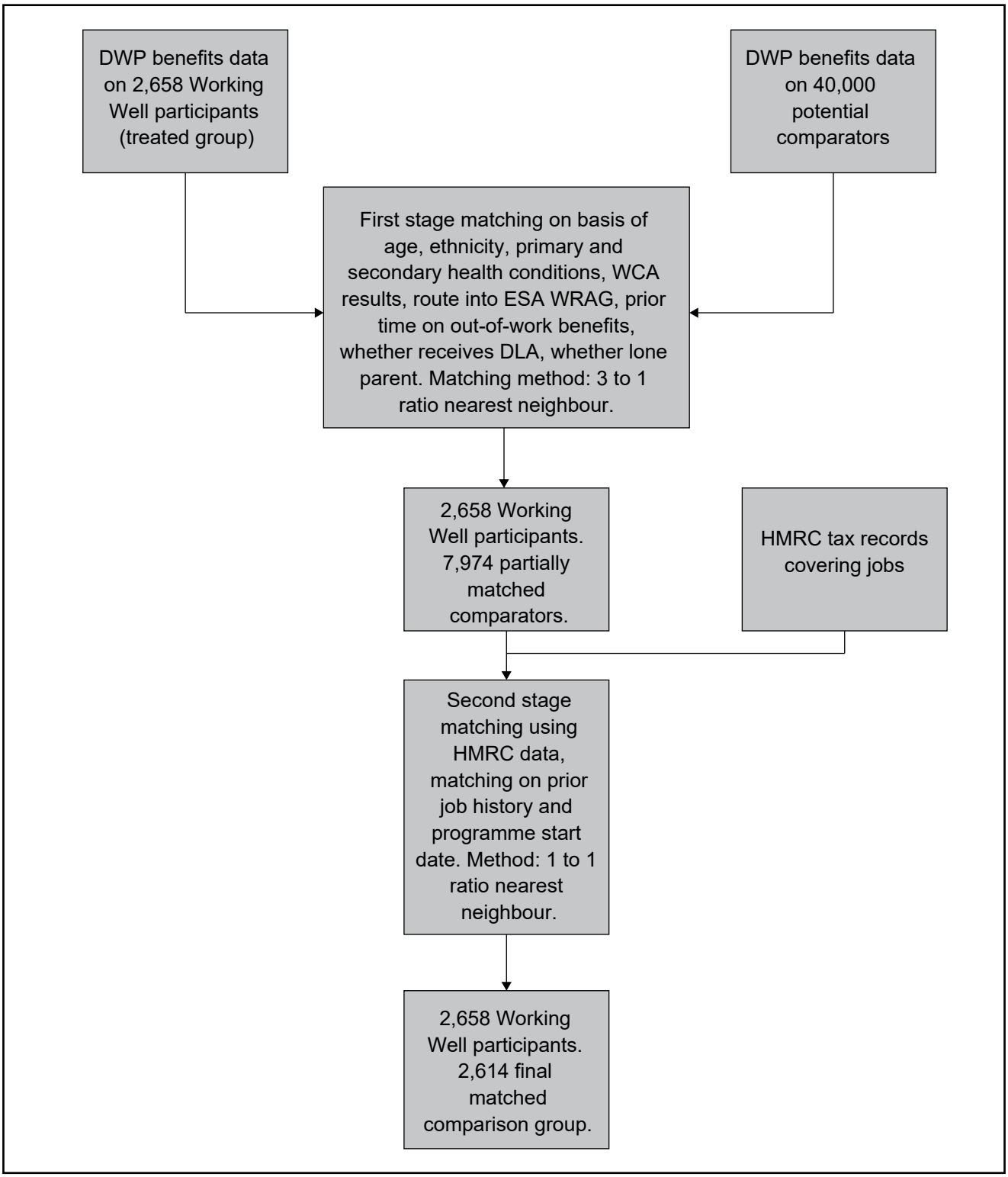
We undertook a two-stage matching process using the PSM approach. Figure 2.1 summarises the approach we took.

---

16 Other matching methods exist and the details on some of the alternatives to nearest neighbour matching are discussed in Appendix B.

17 See Caliendo, M., Mahlstedt, R. and Mitnik, O. (2014). Unobservable but unimportant? The influence of personality traits (and other usually unobserved variables) for the evaluation of labor market policies. IZA Discussion Paper 1407. This paper found labour market histories to be an effective proxy for important unobserved variables such as job search behaviour and confidence. The authors concluded that: "It is clear that the labor market history is able to capture most of the information contained in usually unobservable variables. This point is even stronger if some of the usually unobserved variables are stable over time."

Figure 1.1 Summary of the two-stage matching process



1.2.3 First stage of matching

The first stage matched participants and the comparison group using just DWP benefits data. This avoided the need to match in HMRC job data for the entire 40,000 strong potential comparison group. As individuals can have several spells in work, this could potentially have involved millions of data points. In order to avoid this the HMRC data was matched in at a second stage for just participants and the partially matched comparison group from the first stage matching. This approach also avoided potential personal data risks that could have resulted from a one-stage process, which would have necessitated the transfer of data on over 40,000 individuals. The two-stage approach adopted only required data to be transferred for around 11,000 individuals[18].

With the first stage of matching we identified 7,974 individuals matched on the following characteristics (see Table 2.3.). We identified three times the number of participants, in order to give ourselves the flexibility to refine further the matching in the second stage.

Table 1.3 Variables used in the first stage of matching

Gender
Age
Ethnicity
Primary health condition
Secondary health condition
ESA Group following a Work Capacity Assessment
Route into the ESA WRAG Group
Prior time on out-of-work benefits
Whether in receipt of Disability Living Allowance or not
Whether a lone parent or not

In order to define the comparison group, we included information on the WCA records of participants and comparisons. To our knowledge, this information has not previously been used in evaluations of DWP programmes.

We also used a high level of detail concerning the health conditions recorded by DWP. In the tables in the descriptive analysis section (Section 3), we have simplified these for presentation purposes, and to avoid potential disclosure, into six broad categories. However, for the matching analysis we used the full detail recorded by DWP for both the primary health condition recorded and any secondary condition. This enabled a more detailed match than might otherwise be the case. In particular, the groupings normally used for statistical purposes do not include any detail on mental health conditions beyond the overall grouping.

1.2.4 Second stage matching

Following this first stage of matching, the second stage matched participants in WW with the partially matched comparison group that resulted from the first stage of matching. It was in this second stage that we linked in the HMRC data and matched participants and potential comparators on prior work history.

[18] Obtaining HMRC information on a lower number of individuals is better aligned to DWP's legal gateway from HMRC for use of their data for evaluation purposes.

In addition, in this second stage participants and the comparison group were matched on their start date in WW for participants against the potential start date that would have applied to the comparison group if they had been resident in Greater Manchester and so able to participate in WW. For the comparison group, we imputed a programme date for these based on the median days between completing the Work Programme and the post-Work Programme interview where we did have such information. While the expectation is that the Work Programme completers' interview should take place within eight weeks of completing the Work Programme, this is not always the case. This 'Programme date' is critical in determining the days or weeks on benefit before WW, and the days or weeks in work or off benefit after referral (or the comparison equivalent).

The same one-to-one nearest neighbour matching approach as for the first stage of matching was used in this second stage of between the treated and the partially matched comparison group from stage one. A one-to-one ratio was used because the statistical power of a study depends on the smaller of the two groups. Therefore, having a larger comparison group than the treated group would not change the statistical significance of the results to be reported. Reducing the comparison group to the same size (approximately) as the treated group under a matching process means that the closest matches are used, with matches that were slightly more distant (taking into account all relevant variables) being excluded.

The comparison group that emerged from the second stage of matching was our final matched comparison group against which to compare the participants in WW.

1.2.5 Data limitations

The HMRC data (based on P45s returned to HMRC) may be an underestimate of jobs. Firstly, it does not include the self-employed. Secondly, some employers delay sending in P45 forms and only supply detailed information as part of their end-year accounting with HMRC. This may lead to missing data from our sample for both the treated and comparison groups. In this case, HMRC receives the P14 (counterpart to P60 given to the employee) annually. DWP takes account of this by allowing at least a further three months for P45 information on jobs to reach HMRC and then DWP. This means that DWP are able to track information on jobs with a time lag compared to their benefits data. This affects the data available for this study, where off-benefits information is available to November 2015, but P45 job information only to the end of August 2015. Thirdly, jobs below the thresholds for tax may not be included, though this depends on the employers, where large employers usually send information to HMRC irrespective of tax liability. However, these factors producing an undercount of jobs are likely to affect WW participants and the comparison group equally. Therefore, they should not affect the results of the impact assessment.

1.3 Time in work and off benefit outcome variables

For the initial impact analysis, we have defined 'weeks in work' as being any week in which the HMRC P45 data records a paid Pay As You Earn (PAYE) job as existing at all, after the 'programme date' of referral or equivalent. This is parallel to the International Labour Organisation (ILO) definition of employment, which is a job that exists in the reference week, regardless of whether the employment exists for the whole week. We have calculated for each individual whether they were in work in each week from the first week after referral potentially through to as far as the 65th week where data for individuals exists for this

long after referral. In practice, as discussed in more detail in Section 2.1 we have very few individuals with data records this long after their referral.

In the analysis of ‘off-benefit’ weeks, we have identified whether people are on benefit in each week from the programme date again potentially up to the 65th week after referral, where data for an individual existed for that long a period. We have then compared this to the maximum number of weeks they could have been on benefit between the programme date and the last date recorded in the DWP data (15 October 2015). The off-benefit week total is then the difference between the maximum on-benefit weeks and the actual on-benefit weeks.

2 Assessing the matching process

2.1 Introduction

Section 2 discussed the need for a matched comparison group, which is as similar as possible to the participants in Working Well (WW) in terms of their respective personal characteristics and prior labour market histories. This raises the question of how effective our two-stage matching process has been in reducing the differences in characteristics between the treated and the final matched comparison group. This is explored here and, in particular, we focus on those characteristics where there were substantial differences prior to matching and how the matching process improved matters in this regard.

2.2 Characteristics of the treated and comparison groups

For four variables, gender, age, ethnicity and lone parent status, the unmatched potential comparison group of 40,000 Employment and Support Allowance (ESA) Work Related Activity Group (WRAG) individuals for which the Department for Work and Pensions (DWP) supplied us with data were already quite closely in line with the treated group (see Appendix C). However, for other characteristics the composition of the treated and the unmatched potential comparison group was different. Tables 3.1 to 3.4 show how the matching process has reduced the difference in characteristics between the two groups. They show the characteristics of participants taking part in WW in Greater Manchester and the characteristics of the people in the comparison group both prior to and after the second and final stage of matching, for the following variables:

- Primary health conditions
- Latest Work Capacity Assessment (WCA) result
- Route into the WRAG
- Prior duration on out-of-work benefits

The ‘Treated group’ column in Tables 3.1 to 3.4 represents the percentage of participants in WW that fall under the various categories being considered. The column ‘Potential comparison group’ shows the percentage of people in the initial unmatched comparison group that fall under the various categories shown. Similarly, the column ‘Final comparison group’ shows the percentage of people in the final matched comparison group that results from the two-stage matching process that fall under these categories. The final two columns show the percentage point differences between the treated group of WW participants and the initial unmatched potential comparison group for the characteristics under consideration and then the same percentage point differences between the treated group and the final matched comparison group that results from our two-stage matching process. By reading across the columns in Tables 3.1 to 3.4, we can see the extent of the initial differences in characteristics

between the participants in WW (Treated group) and the potential unmatched comparison group, and how that difference is usually reduced by the two-stage matching process that produces the final matched comparison group.

Table 2.1 Comparisons of the treated (Working Well participants), potential comparison group and final comparison group: Primary health conditions

	Treated group	Potential comparison group	Final comparison group	Difference treated – Potential comparison	Difference treated – Final comparison
Mental and behavioural conditions	60%	55%	60%	5%	0%
Diseases of the nervous system	5%	4%	4%	1%	0%
Diseases of the circulatory or respiratory system	3%	4%	4%	1%	0%
Diseases of the musculoskeletal system and connective tissue	11%	13%	11%	2%	0%
Injury, poisoning and certain other consequences of external causes	4%	4%	4%	0%	0%
Other	17%	20%	17%	-3%	0%
Total	100%	100%	100%		

Note: The individual categories may not sum exactly to 100 per cent due to rounding.

The health conditions recorded for WW participants by DWP for ESA claimants were predominantly (60 per cent) mental health conditions. In the matching process, the full, detailed list of health conditions were used so that for mental health: depression, anxiety, and panic attacks were considered separately from learning disabilities and conditions such as psychosis or schizophrenia. In Table 3.1, we present the summary categories that are used by DWP for other statistical purposes. The differences that stand out are that the potential comparison group compared to the treated group had a lower proportion of individuals with mental health conditions and a slightly higher proportion with musculoskeletal conditions. These differences were reduced by the two-stage matching process. Thus, the final comparison group is a better fit with the treated group of WW participants on their health conditions.

Table 2.2 Comparisons of the treated (Working Well participants), potential comparison group and final comparison group: ESA Work Capability Assessment latest result

	Treated group	Potential comparison group	Final comparison group	Difference treated – Potential comparison	Difference treated – Final comparison
Support Group	0%	4%	1%	-4%	0%
WRAG	79%	56%	80%	23%	-2%
Fit for Work	5%	10%	5%	-5%	0%
Other	11%	27%	11%	-16%	0%
Unknown	5%	3%	3%	2%	2%
Total	100%	100%	100%		

Note: The individual categories may not sum exactly to 100 per cent due to rounding.

WW was open to ESA WRAG claimants who completed the Work Programme and were not in work at that point. Therefore, it would be expected that they would be in the ESA WRAG. However, this can be affected by WCAs which are intended to be periodic. This is especially so for those initially placed in the WRAG, who have a 'prognosis' of being expected to be fit for work within some defined period of time. Therefore, the most recent WCA record held includes individuals who have subsequently been found to be fit for work, or have been placed in the Support Group (not fit for work) for a range of reasons, or have had a break in claim and have reclaimed ESA, and are in the assessment phase of an ESA claim.

While the treated group includes 79 per cent with a latest WCA record as WRAG, the potential comparison group included a much lower proportion who were WRAG (56 per cent), and so much larger proportions in other categories (Table 3.2). The matching process excluded many of these cases so that the final matched comparison group was closely matched to the treated group on the results of the latest WCA. Compared to the other characteristics the differences here between the treated and potential comparison group were much greater. Hence, the results of the latest WCA is one variable where the two-stage matching process has done most to make the treated and final comparison group similar to one another and so removed a potential source of bias from the results of the impact assessments set out in Section 5.

Table 2.3 Comparisons of the treated (Working Well participants), potential comparison group and final comparison group: ESA Work Capability Assessment ESA WRAG cases by route into the WRAG group

	Treated group	Potential comparison group	Final comparison group	Difference treated – Potential comparison	Difference treated – Final comparison
Work Related Activity Group (no further detail)	22%	27%	22%	5%	0%
WRAG: At WCA	42%	32%	42%	-10%	0%
WRAG – for medical reasons	3%	3%	3%	0%	0%
WRAG – clerical assessment	0%	1%	0%	1%	0%
WRAG – after appeal	11%	13%	12%	2%	1%
WRAG – at reconsideration	21%	24%	20%	3%	-1%
Total	100%	100%	100%	100%	100%

Note: The individual categories may not sum exactly to 100 per cent due to rounding.

The WCA data contains further details on the process by which those in the WRAG came to be assessed in that category. Table 3.3 shows this, and presents the WRAG routes as a percentage of the total in the WRAG category.

Claimants could be assessed into the ESA WRAG at the assessment itself[19]. Other routes into the ESA WRAG include:

- Those initially found Fit for Work could be 'moved' by a DWP Decision Maker into the WRAG group[20].
- Those who did not accept their Fit for Work assessment could seek reconsideration by the DWP.
- Finally, people could appeal against a finding of being Fit for Work.

In addition, around a fifth of the treated group were classified into the ESA WRAG without further information being provided on why this was so.

These WRAG route categories were included in the matching process on the basis that those initially found to be Fit for Work, and later placed in the WRAG through some particular process, may have had some systematic differences in their ability to find work compared to those taking a different route.

19 This occurred when they were categorised as having 15 points or more against the criteria laid down in the legislation.

20 This was done on medical or for other grounds.

The matching process successfully reduced the initial differences between the potential comparison group and the treated group (penultimate column of Table 3.4) for the final matched comparison group against the treated group (last column of Table 3.4).

Table 2.4 Comparisons of the treated (Working Well participants), potential comparison group and final comparison group: benefit duration on out of work benefits

Benefit duration	Treated group	Potential comparison group	Final comparison group	Difference Treated – Potential comparison	Difference Treated – Final comparison
On out-of-work benefits for less than 2 years	2%	10%	2%	8%	0%
On out-of-work benefits for 2 and under 3 years	39%	39%	40%	0%	1%
On out-of-work benefits for 3-4 years	39%	33%	39%	7%	0%
On out-of-work benefits for 4 and under 5 years	17%	14%	17%	3%	0%
On out-of-work benefits for 5 years or more	2%	4%	2%	-2%	0%
Total	100%	100%	100%		

Note: The individual categories may not sum exactly to 100 per cent due to rounding.

The treated and potential comparison groups had completed two years on the Work Programme and returned to Jobcentre Plus. A rather higher proportion of the potential comparison group (10 per cent) had been on out-of-work benefits for less than two years than the treated group (2 per cent), which is likely to indicate some form of break in claim, which could have included time in work. Hence, this group may well be rather more job ready than individuals with longer periods on out-of-work benefits.

The other category where there is a substantial difference between the treated group and the potential comparison group is for those who had been on out-of-work benefits for 3-4 years (39 per cent and 33 per cent respectively). The matching process has reduced the differences between the potential comparison group and the treated group on the proportions of the two groups who had different prior durations on out-of-work benefits to very small levels. Thus, again, the final comparison group is a better fit with the treated group of WW participants on this variable and a possible source of bias potentially affecting our impact assessment results has been addressed.

Overall, the composition of the final matched comparison group appears to be much more in line with that for the treated group of WW participants. Hence, the final comparison group appears to be a better match for WW participants than the initial potential comparison group. The characteristics of the matched comparison group are much closer overall to those of the participants in WW in terms of the important characteristics considered. All bar one of the differences between the proportions of the treated group of WW participants and the matched comparison group are less than one percentage point with the one exception being the percentage of participants who are ESA WRAG after an appeal.

We tested these findings using formal statistical tests (see Appendix C for details). These tests indicated that there were statistically significant differences between the initial unmatched comparator and treated groups for:

- WCA results
- Whether or not in receipt of Disability Living Allowance
- Prior duration on out-of-work benefits
- Primary and secondary health condition

After matching, no statistically significant differences remained between the final matched comparison group and the treated group. Hence, we can conclude that the two-stage matching process has produced a treated and final comparison group, which are similar to one another across a range of personal characteristics. This should remove the possibility that differences in characteristics between the treated and final comparison group would bias the results of the impact assessments set out in Section 5.

3 Initial analysis of labour market outcomes

This section provides the first consideration of the impact of the pilot programme. It is based on comparing off benefit and job outcomes for the treated group of Working Well (WW) participants and the final matched comparison group that resulted from our two-stage matching process. It should be noted that these differences do not take account of any local labour market or local neighbourhood effects (discussed in Section 5.2), as we did not include local level variables in our matching process. Instead, these local effects are taken into account via regression analysis, which is set out in Section 5.

We took this approach because we wanted to identify whether the strength of the local labour market and, or other neighbourhood effects would show a significant effect on the results of a localised initiative. In policy terms, this could influence whether or not the targets set for local initiatives (like WW) should be set solely with regard to national-level data or should take some account of demand and supply in the labour market at the local level.

In view of further devolution discussions this seemed a more useful analysis than a matching exercise that would have excluded otherwise similar people who lived in areas with stronger labour markets. Analytically, the two approaches should produce similar results, but in terms of the policy relevance, we preferred making these local effects explicit through the regression analysis modelling set out in Section 5.

3.1 Off out-of-work benefit rates

Table 4.1 shows the number of people in the treated group of WW participants, and the number of people in the matched comparison group who were off out-of-work benefits for any period, for one week, for 13 weeks, for 26 weeks, for 39 weeks and for 52 weeks. We do not have tracking data for all participants that would cover off-benefit periods for 52 weeks. However, the data we do have is approximately balanced between the treated and comparison groups on the length of time for which data is available.

For off-benefit models, we have tracking data that enables tracking for 13 weeks post the programme date for 100 per cent of the cases. For 26-week tracking, we have information on 92 per cent of comparison group and 93 per cent of treated group cases. For 39 weeks, we have tracking information on 80 per cent of comparison cases and 78 per cent of treated cases. Information on the 52-week histories is more limited. We have information on 64 per cent of treated group and 74 per cent of comparison group cases.

We also present the percentage figures to make the comparison between the treated and matched comparison groups clearer. Up to and including periods of at least 26 weeks off benefit, a slightly higher percentage of the matched comparison group spent time off benefits compared to the treated group. For a period of 39 and 52 weeks off benefit, there was no difference between the treated and comparison groups. As we have noted, these comparisons do not take account of the influence of local labour market or neighbourhood factors. The labour markets from which our comparison group are taken are more buoyant than Greater Manchester, e.g. higher average employment rate (see Section 5.2 for details). This may tend to increase the chances of our comparison group spending time off out-of-

work benefits relative to the WW treated group.

Table 3.1 Off benefit rates for the treated and final matched comparison groups

Off benefit measure	Number		Percentage	
	Comparison	Treated	Comparison	Treated
Any period off benefit				
Not off benefit	1,857	2,082	76.9	78.4
Off benefit	559	574	23.1	21.6
Total	2,416	2,656	100.0	100.0
Off benefit for at least one week				
Not off benefit	1,893	2,104	78.4	79.2
Off benefit	523	552	21.6	20.8
Total	2,416	2,656	100.0	100.0
Off benefit for at least 13 weeks				
Not off benefit	2,180	2,440	90.2	91.9
Off benefit	236	216	9.8	8.1
Total	2,416	2,656	100.0	100.0
Off benefit for at least 26 weeks				
Not off benefit	2,353	2,596	97.4	97.7
Off benefit	63	60	2.6	2.3
Total	2,416	2,656	100.0	100.0
Off benefit for at least 39 weeks				
Not off benefit	2,390	2,628	98.9	98.9
Off benefit	26	28	1.1	1.1
Total	2,416	2,656	100.0	100.0
Off benefit for at least 52 weeks				
Not off benefit	2,406	2,644	99.6	99.5
Off benefit	10	12	0.4	0.5
Total	2,416	2,656	100.0	100.0

Note: The total numbers for both the final matched comparison group and the treated group reported above differ from those reported elsewhere in this report. This is because for 200 cases the data we received did not allow their benefit/off benefit status to be calculated. This affected 198 individuals in the comparison group and 2 individuals in the treated group.

3.2 Job entry and sustainment rates

We identified employment spells from Her Majesty's Revenue and Customs (HMRC) information derived from P45 returns by employers. We identified whether a person was in employment in each week by whether an employment spell included at least one day in that week. This also identified those who had more than one job spell in a given week, and ensured that we recorded whether employment occurred in that week.

We have undertaken this exercise for each seven days since the programme referral date for each individual (or equivalent for the comparison group), potentially up to week 65. We have tracking data for only a few individuals for this period of time. We have tracking data on 77 per cent of the Working Well sample up to 13 weeks, 57 per cent up to 26 weeks, 36 per cent up to 39 weeks and 22 per cent up to 52 weeks. The comparison group figures are similar. We have less tracking data for employment than we do for benefits, because HMRC data initially becomes available to Department for Work and Pensions (DWP) and is then processed for evaluation purposes, excluding people who have not been claimants of DWP benefits, before then being made available.

The 'sustainment' analysis depends on a total number of weeks in work passing the 13-week, 26-week, 39-week and 52-week thresholds, rather than being a measure of continuous employment. For example, it thus includes as 26 weeks in work cases where people have had two jobs with a break in between but which together total at least 26 weeks in work as well as cases where there is one continuous period of 26 weeks or more in work.

This approach gave us a total of 124 of the 2,658 WW participants going into jobs (treated group), and also 124 people out of the 2,614 in the final matched comparison group going into jobs at some point. In percentage terms, this means that 4.7 per cent of both WW participants and the final matched comparison group went into jobs during the time period analysed. As the labour markets that the matched comparison group were drawn from were more buoyant than those for the treated group, this may have affected the relative chances of the comparison and the treated groups moving into work. Taking this into account suggests that the treated group may have performed better than the matched comparison group on job entry.

Table 3.2 Job entry rates for the treated and final matched comparison groups

Job entry	Number		Percentage	
	Matched Comparison	Treated	Matched Comparison	Treated
Did not enter work	2,490	2,534	95.3	95.3
Entered work	124	124	4.7	4.7
Total	2,614	2,658	100.0	100.0

On job sustainment, the treated group, WW participants, had slightly higher rates of job sustainment for 13 and 26 weeks compared to the matched comparison group. For 39 and 52-week job sustainment, the outcomes are very similar for the treated and matched comparison groups, see Table 4.3.

Table 3.3 Job sustainment rates for the treated and final matched comparison groups

Job sustainment	Number		Percentage	
	Matched comparison	Treated	Matched comparison	Treated
In work for at least 13 weeks				
Not sustained	2,552	2,581	97.6	97.1
Work sustained	62	77	2.4	2.9
Total	2,674	2,658	100.0	100.0
In work for at least 26 weeks				
Not sustained	2,588	2,615	99.0	98.4
Work sustained	26	43	1.0	1.6
Total	2,614	2,658	100.0	100.0
In work for at least 39 weeks				
Not sustained	2,599	2,641	99.4	99.4
Work sustained	15	17	0.6	0.6
Total	2,614	2,658	100.0	100.0
In work for at least 52 weeks				
Not sustained	2,614	2,652	100.0	99.8
Work sustained	0	6	0.0	0.2
Total	2,614	2,658	100.0	100.0

Another way of considering job sustainment is to look at the extent to which those who entered work sustained their work for 13, 26, 39 and 52 weeks. This is shown in Table 4.4 for both the treated (WW participants) and the matched comparison groups. The second and third columns show the numbers in each group who entered work and then sustained work for subsequent periods. The fourth and fifth columns show the percentage of the two groups who had entered employment who sustained work for 13, 26, 39 and 52 weeks respectively. Comparing the treated and matched comparison group, the treated group have substantially higher rates of job sustainment at 13 and 26 weeks. Thereafter, job sustainment rates remain higher for the treated group but by a smaller margin.

The research we have undertaken is an impact assessment rather than a more comprehensive evaluation including a process evaluation. Our impact assessment is able to estimate the impacts of WW, but cannot explain why these results are as they are. That is the role of process evaluation, combining qualitative and quantitative research methods. Thus, any explanations that we offer are to a degree speculative. WW participants often have a range of problems such as health issues, substance abuse problems and housing needs. WW seeks to address these problems before moving on to focus on employment. This approach, hopefully, increases individuals' chances of sustaining entry into work once this is achieved.

Table 3.4 Job sustainment for those entering work

	Matched comparison	Treated	Matched comparison	Treated
Entered work	124	124	100.0%	100.0%
In work for at least 13 weeks	62	77	50.0%	62.1%
In work for at least 26 weeks	26	43	21.0%	34.7%
In work for at least 39 weeks	15	17	12.1%	13.7%
In work for at least 52 weeks	0	6	0.0%	4.8%

3.3 Conclusions

The comparisons of periods off out-of-work benefits show that the final matched comparison group had higher percentages of individuals off such benefits for periods of up to 13 weeks than the treated group of WW participants. However, for long periods off out-of-work benefits there is no material difference between the two groups. Both groups had an equal chance of moving into work, but once they did then WW participants were more likely than the matched comparison group to stay in work. This was particularly true at 13 and 26 weeks.

However, caution should be exercised in interpreting these comparisons as reflecting the effects of WW, as we did not match participants and the final matched comparison group on the basis of them coming from local areas with similar labour market or neighbourhood conditions. On average, the matched comparison group came from areas which had higher employment rates than the treated group from Greater Manchester. This is likely to have boosted both the off benefit and into work rates of the final matched comparison group relative to the treated group of WW participants. In the next section, we control for possible local labour market/neighbourhood effects via the use of multi-variate regression analysis.

4 Impact assessment

4.1 Introduction

This chapter sets out in brief:

- a comparison of the local labour market/neighbourhood conditions pertaining to the treated and comparison groups
- the methodologies that were used to assess the early impact of WW on a range of job and off out-of-work benefit outcomes
- the findings from this assessment

It should be noted here that as we only have data covering the first year and a half of Working Well that this impact assessment is only for the early stages of the programme and not the programme over its complete lifetime. Outcomes observed over a longer period might show a different picture to the ones observed in this early assessment.

The technical details of the methodologies used and the detailed results of the impact assessments undertaken are set out in Appendix A.

4.2 Local labour market/neighbourhood conditions

Table 5.1 compares four labour market/neighbourhood variables for the local authorities in which individuals in the treated and final matched comparison groups live. The employment rate is lower, and the unemployment and inactivity rates are both higher for the treated group. Hence, the treated group are situated in less buoyant local labour markets than the matched comparison group. Median pay levels were also lower in the Greater Manchester authorities where the treated group lived compared to the matched comparison group.

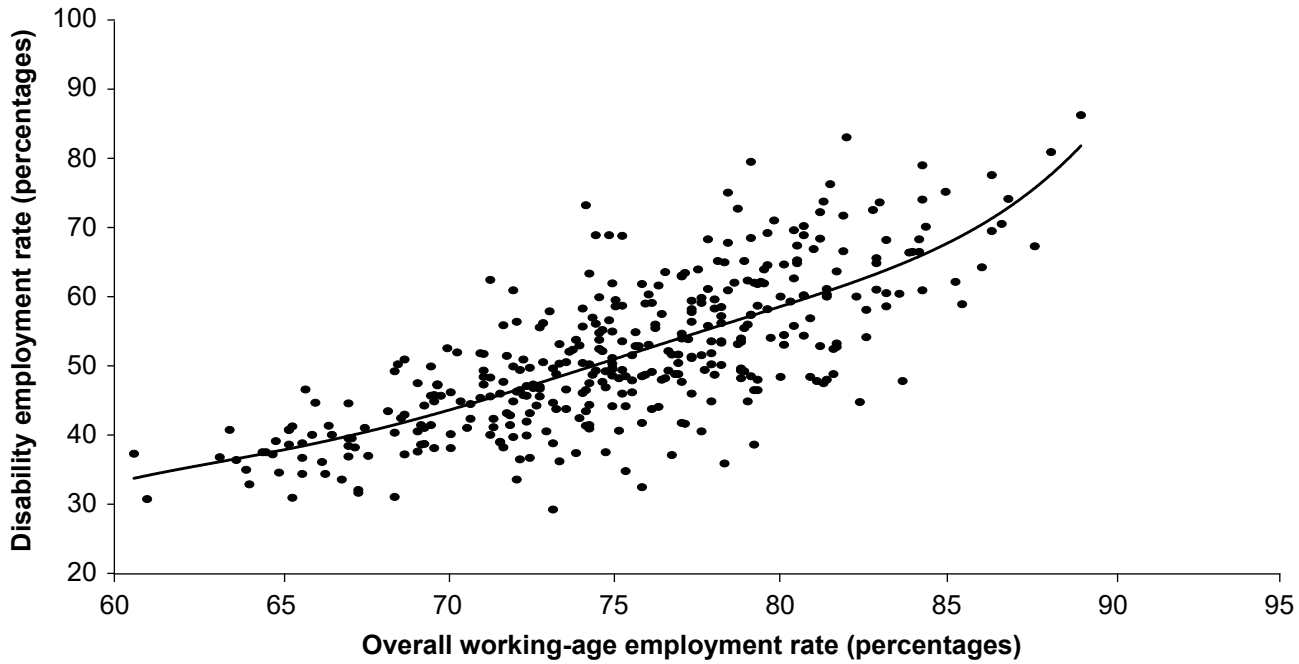
We undertook t-tests to see if the means for these variables were statistically significantly different between the treated and matched comparison groups. The null hypothesis being that the means in the two groups were the same. The statistical significance levels from these t–tests are shown in the final column of Table 5.1. These are below both the standard 1 per cent and five per cent levels, and so indicate that this null hypothesis is decisively rejected.

Table 4.1 Local labour market conditions affecting the control and treated groups (Mean comparisons)

Indicator	Matched comparison	Treated	Difference significant at:
Employment rate	70%	67%	1%
Unemployment rate	7%	8%	1%
Inactivity rate	24%	27%	1%
Hourly pay (FT)	£12.90	£12.06	1%

Hence, we can conclude that on average the local areas from which the matched comparison group are drawn have significantly more buoyant labour markets/ neighbourhoods where working is more of the norm than the relevant local labour markets/ neighbourhoods in Greater Manchester that apply to the treated group. In addition, this final column also indicates that hourly pay levels are statistically significantly lower in the local labour markets which are relevant to the treated group compared to those for the matched comparison group.

Figure 4.1 Employment rate for disabled people against the overall working age employment rate (Local authorities, April 2015 to March 2016)



Source: Annual Population Survey, ONS.

We would expect that equivalent people in a locality where the labour market was tighter and work was more of the norm, with higher employment and lower unemployment, would be able to find and sustain work more easily than in areas where the labour market is weaker. There is evidence that this applies to disabled people as much as other groups in the population. The employment rate for disabled people is higher in areas with overall higher employment rates. (See Figure 5.1) Therefore, given that Greater Manchester has, on average, weaker labour markets/neighbourhoods where working is less of a norm than the areas in which the matched comparison group are found, this could bias our understanding

of the success or otherwise of WW, if these local effects are not controlled for. This is done via regression analysis as set out in this section of the report.

Local pay levels may also affect individuals' chances of entering employment/leaving out-of-work benefits for several potential reasons, including:

- Higher local pay levels may induce more individuals to leave benefits and enter work
- Lower local pay levels may reflect a greater preponderance of lower level, lower paid jobs which may facilitate benefit claimants entry into work
- The average reservation wage at which low skilled individuals are willing to work may differ systematically between local areas. If so, then areas with lower average reservation wages would have both lower average wage levels and more low skilled people in work.

Again, we did not match individuals according to the median pay levels prevailing in the local areas in which they lived, but included this variable in our regression analysis set out below.

4.3 Methodology for binary outcomes

As noted in Section 2, we created a matched comparison group of similar ESA claimants for the participants in WW for which we had data. This was done using a Propensity Score Matching (PSM) approach so that the comparison group matched participants in the WW pilot on a range of characteristics and prior labour market histories.

Regression analysis was then undertaken in order to assess the net early impact that participation in WW had on an individual's chances of achieving the following labour market outcomes:

- job entry;
- job sustainment for 13 weeks or more;
- job sustainment for 26 weeks or more;
- any time spent off out-of-work benefits;
- at least one week spent off out-of-work benefits;
- at least 13 weeks spent off out-of-work benefits;
- at least 26 weeks spent off out-of-work benefits;
- at least 39 weeks spent off out-of-work benefits;
- at least 52 weeks spent off out-of-work benefits.

These outcomes were all binary outcomes, i.e. they took the value 1 if they were achieved and 0 if they were not. For example, for job entry if an individual entered work then their outcome was coded as 1 and 0 if they did not enter work. Regression analysis is a statistical technique for estimating a regression function, which is the relationship between the variable being analysed (the dependent variable) and a number of other variables (independent variables) which are thought to influence it. Specifically, regression analysis estimates how the dependent variable changes when any one of the independent variables varies in magnitude holding the other independent variables constant. It does this by estimating coefficients for each of the independent variables.

For the assessment of WW, the aim is to use regression analysis to isolate the impact of the pilot programme on the nine different labour market outcomes set out above, net of the influence of any confounding factors, i.e. personal characteristics, and prior labour market history. In order to achieve this, we estimated regression functions for a combined sample of matched pilot participants with the matched comparison group. Our single database included 2,658 participants who started on WW and 2,614 individuals in the final matched comparison group.

These regression functions included a treated dummy variable taking the value 1 for participants in WW and 0 for our matched comparison group. The estimated coefficient on this dummy variable gives an estimate of the early impact of participation in WW on the labour market outcome being analysed, e.g. job entry. The regression functions also included a number of other independent variables covering a range of personal characteristics (for example, gender, and ethnicity) and individuals' prior durations on out-of-work benefits. These provided a further check that the estimated treated effects were not biased by the influence of these other factors. Finally, as we had not sought to match participants with the comparison group on the basis of the comparison group being in similar labour markets or local neighbourhoods we included two local variables as independent variables in our regression functions: the relevant lower level local authority employment rate and the local median hourly earnings for full-time workers.

4.4 Aggregate programme level results

4.4.1 Impacts of participation in Working Well

The results of our regression analyses are summarised in Table 5.2, which shows the estimated early impact of participation in WW on various job and benefit receipt outcomes. The first column in Table 5.2 shows the outcome variables that were analysed using regression analysis as described above. The second column gives the estimated coefficient on the dummy variable for participation in WW for the particular labour market outcome variable in question. The final column indicates whether the estimated coefficient is statistically significantly different from zero and, if it was, the statistical significance level at which this was true. The comparison being assessed here is between participants in WW and our final matched comparison group, that resulted from the two-stage matching process.

For the three job outcome measures analysed participation in WW is estimated to have a positive impact, i.e. potentially to increase the chances of these outcomes occurring for WW participants compared to the matched comparison group. However, the estimated coefficient on the treated variable is only statistically significantly different from zero for 26-week job sustainment. For the six off out-of-work benefit outcomes, WW is estimated to have a negative impact, i.e. potentially to reduce the chances of these outcomes occurring for WW participants compared to the matched comparison group. However, none of the estimated coefficients on the treated variables here are statistically significantly different from zero. Hence, these results do not allow us to reject the proposition that participation in WW has no effect on the receipt of out-of-work benefits.

Table 4.2 Early impact of participation in Working Well on job and off benefit outcomes

Outcome	Estimated coefficient	Significance level
Job entry	0.087	Not significant
Job sustained for 13 weeks	0.269	Not significant
Job sustained for 26 weeks	0.679	5%
Off benefit for any period	-0.064	Not significant
Off benefit for one week	-0.019	Not significant
Off benefit for 13 weeks	-0.163	Not significant
Off benefit for 26 weeks	-0.114	Not significant
Off benefit for 39 weeks	-0.083	Not significant
Off benefit for 52 weeks	0.101	Not significant

Note: Table 2.2 shows the maximum number of participants and individuals in the matched comparison group who could have achieved the above various outcomes given their referral date to WW/equivalent programme date for the matched comparison group.

4.4.2 Impacts of local labour market conditions/local neighbourhoods

As discussed in Section 5.3 the regression functions used to analyse the nine different labour market outcomes noted above include two local level variables, the local employment rate and the local median hourly pay for full-time workers. This is in order to address the potential impact on labour market outcomes of local labour market conditions/local neighbourhood effects. The local employment rate is found to have a positive impact on all nine labour market outcomes analysed. This is intuitively sensible, as one would expect a more buoyant local labour market, and or a neighbourhood where working is more the norm, to increase an individual's chances of obtaining employment or moving off out-of-work benefits. This positive impact is found to be statistically significant (at the 1 per cent level) for all three job outcome variables analysed. It is also statistically significant (at least the ten per cent level) for any time spent off out-work-benefits, one week or more off such benefits and 13 weeks or more off out-of-work benefits. Thus, the impact of the local employment rate is found to be statistically significantly different from zero (at least the ten per cent level) for six of the nine labour market outcomes analysed.

Local median hourly pay for full-time workers is found to have a negative effect on all three job outcome variables. This effect was statistically significantly different from zero for both job entry and 13-week job sustainment. This variable may be picking up compositional differences across local areas. Lower median full-time pay would then reflect a greater frequency of lower level jobs and a lower frequency of higher-level jobs in the local area. Lower level jobs are the sort of jobs one might expect both WW participants and the matched comparison group to be more likely to enter. Figures 1.6 and 1.8 showed that Greater Manchester has a higher share of employment in lower level occupations and a lower share in higher-level occupations than the UK as a whole, which is consistent with this explanation.

For the six off out-of-work benefit outcomes, local median hourly pay for full-time workers is found to have either a positive or a negative impact depending on which particular off benefit outcome variable is considered. However, in all cases the estimated coefficient on this variable is not statistically significantly different from zero. Hence, the proposition that the

level of local hourly earnings (or the composition of employment in the local area, if this is what this variable is proxying) has no effect on the receipt of out-of-work benefits cannot be rejected.

We assessed the impact of including or excluding the two local variables on the estimated treatment effects of WW by running regression analyses for job entry; at least one week off out-of-work benefits; and 26 weeks in work as follows:

- with no local variables included;
- with just local full-time hourly pay included;
- with just the local employment rate included;
- with both local variables included (our preferred approach).

The inclusion of the local employment rate in regression specifications increases the magnitude of the estimated treatment effect. The impact of including hourly pay is in contrast mixed. Comparing the specifications which include both local variables against those without both local variables increases the magnitude of the estimated treatment effects. This demonstrates the importance of taking into account the impact of local labour market or neighbourhood conditions, as ignoring them would have biased down our estimates of the impact of treatment on job and benefit outcomes.

4.5 Results by provider

We undertook similar regression analysis to that set out above separately for the two providers, Big Life and Ingeus. These are summarised in Table 5.3. However, we do not separately identify the two providers in this report. They are simply denoted as Provider A and Provider B. It was only possible to undertake this analysis for five different labour market outcomes:

- Job entry.
- 13-week job sustainment.
- Being off out-of-work benefits for any period.
- Being off out-of-work benefits for one week.
- Being off out-of-work benefits for 13 weeks.

For job outcomes, participation in WW provided by Provider A was not found to have a statistically significant early stage impact. However, for Provider B participation in WW was found to have a positive and statistically significant impact for job entry (at ten per cent level), and for 13-week job sustainment (at five per cent level).

For off benefit outcomes, Provider B was found to have a positive and statistically significant impact on spending at least one week off out-of-work benefits (at the ten per cent level). However, Provider B provision was not found to have a statistically significant impact on any other off benefit outcomes and Provider A provision was not found to have a statistically significant impact on any of the off- benefit outcomes considered.

Table 4.3 Early impact of participation in Working Well on job and off benefit outcomes by provider

Outcome	Estimated coefficient	Significance level
Job entry, Provider A	-0.270	Not significant
Job Entry, Provider B	0.294	10%
Job sustained for 13 weeks, Provider A	-0.001	Not significant
Job sustained for 13 weeks, Provider B	0.513	5%
Off benefit for any period, Provider A	-0.044	Not significant
Off benefit for any period, Provider B	0.129	Not significant
Off benefit for one week, Provider A	0.030	Not significant
Off benefit for one week, Provider B	0.154	10%
Off benefit for 13 weeks, Provider A	-0.080	Not significant
Off benefit for 13 weeks, Provider B	-0.005	Not significant

4.6 Weeks in work and weeks off benefits

As well as analysis of the early impact of WW on job entry, job sustainment, exit from out-of-work benefits and the extent to which time off benefit is sustained we also assessed the impact on additional weeks in work and weeks off benefit.

Regression functions were again estimated to assess the impact of participation in WW on weeks spent in work or off out-of-work benefits. A different type of regression analysis was used because the linear regression approach we used for the binary labour market outcomes above was not suitable for estimating the impact on weeks in work or weeks off benefit. Instead, we used a method known as Zero Inflated Negative Binomial (ZINB) regression approach. The technical details of this approach are set out in Appendix D.

This ZINB approach explicitly models zero (i.e. no time in work or off out-of-work benefits) and positive outcomes (i.e. some time spent in work or off out-of-work benefits) separately. This is required because the data we have on WW participants indicates that only 22 per cent spent any time off out-of-work benefits and only 5 per cent spent any time in work. Hence, the vast majority of WW participants had a zero outcome. It should be noted that this is also true for the matched comparison group and by itself does not indicate that WW has not had a positive impact.

As before, the regression functions used here again included a number of other independent variables covering a range of personal characteristics and individuals' prior durations on out of work benefits, and two local labour market/local neighbourhood variables the local authority employment rate and the local median hourly earnings for full time workers.

Table 5.4 shows the results of this regression analysis with respect to the impact of participation. These indicate that participation in WW had a positive and statistically significant impact on the number of weeks in work if job entry had occurred. This translated through to an estimated early impact of participation in WW of increasing weeks in work for those entering work by 4.57 weeks compared to the matched comparison group. However, participation was not found to have a statistically significant early impact on whether or not job entry occurred. Nor did it have a statistically significant early impact on either whether or not an individual left out-of-work benefits or if they did the amount of time they spent off these benefits.

These results for weeks in work, or off benefit are consistent with our previous linear regression analysis. On job outcomes, we previously found no statistically significant impact from WW on job entry, but a statistically significant and positive impact on 26-week job sustainment. This is consistent with the idea that WW's impact has come not via increasing the rate of job entry, but by lengthening the time individuals spend in work once they enter it. On benefit outcomes, both sets of analyses suggest that WW has not increased participants time off out-of-work benefits compared to the matched comparison group.

Table 4.4 Early impact of participation in Working Well

Outcome	Estimated coefficient	Significance level
Weeks in work given job entry occurs	0.252	5%
That job entry does not occur	-0.084	Not significant
Weeks off out-work benefits given exit from benefit occurs	-0.037	Not significant
That exit from benefits does not occur	0.045	Not significant

We also attempted to evaluate whether the early impact of participation in WW on weeks in work and weeks off out-of-work benefits varied between the two providers. For technical reasons, due to the small numbers in the data who entered work when this is split by provider, this was not possible for weeks in work. Our regression analysis indicated that participation in WW did not have a statistically significant early impact for either provider for either weeks spent off benefit or for an individual's chances of having moved off out-of-work benefits for any period of time.

5 Conclusions

Our impact assessment of Working Well (WW) assessed its early impact on a range of job and off out-of-work benefit outcomes, as follows:

- job entry;
- job sustainment for at least 13 weeks;
- job sustainment for at least 26 weeks;
- weeks in work;
- any time off out-of-work benefits;
- at least one week off out-of-work benefits;
- at least 13 weeks off out-of-work benefits;
- at least 26 weeks off out-of-work benefits;
- at least 39 weeks off out-of-work benefits;
- at least 52 weeks off out-of-work benefits;
- weeks off out-of-work benefits.

WW was estimated to have had no statistically significant impact on job entry. However, it was estimated to have increased the length of time that individuals spent in work. We found that the programme increased weeks in work for those who entered work by an additional 4.57 weeks. This is consistent with our finding that the pilot programme had a positive and statistically significant impact on 26-week job sustainment. Hence, WW's impact appears not to have come via increasing the rate of job entry but by lengthening the time individuals spend in work once they enter it.

We did not find any impacts from the pilot programme on any of the other job outcomes we considered. We also did not find any statistically significant impacts from the pilot programme on any of the off-benefit outcomes we considered.

The research we have undertaken is an impact assessment rather than a more comprehensive mixed methods evaluation including a process evaluation. An impact assessment does not, by its nature, explore why these results are as they are. That is the role of process evaluation, combining qualitative and quantitative research methods.

This means that any explanations that we offer are to a degree speculative. Working Well participants often have a range of problems such as health issues, substance abuse problems and housing needs. WW seeks to address these problems before moving on to focus on employment. Page 91 of the 2016 Working Well Annual Report produced for GMCA by SQW notes that support for participants is sequenced and that:

> *'Working Well addresses wider barriers to work faced by each client which need to be dealt with in order to ensure clients are confident and employable, with the aim of generating more sustainable work outcomes in the longer term.'*

This approach may delay entry into work in the short run but, hopefully, increases individuals' chances of sustaining this entry into work.

There is a contrast between the results above for job and off benefit outcomes. Part of this difference may be down to permitted work rules whereby Employment and Support Allowance (ESA) claimants can continue to be eligible for ESA while in paid work[21]. The Department for Work and Pensions (DWP) have advised that their data cannot be used for a robust analysis of whether periods in work are covered by these permitted work rules. Therefore, an increase in permitted work while continuing to claim ESA is a possibility rather than a finding of this research.

We also assessed the early impact of WW separately for its two providers. It was only possible to undertake this analysis for six different labour market outcomes:

- job entry;
- 13-week job sustainment;
- being off out-of-work benefits for any period;
- being off out-of-work benefits for one week;
- being off out-of-work benefits for 13 weeks;
- weeks off out-of-work benefits.

For Provider A, these showed similar results to those for WW as a whole, with participation in the pilot programme not having a significant impact on job or off benefit outcomes. For Provider B participation in WW was found to have a positive and statistically significant impact for job entry (at ten per cent level), 13-week job sustainment (at five per cent level) and for at least one week off out-of-work benefits (at the ten per cent level).

The mixed results as to whether Working Well had a significant early stage impact on employment or off benefit outcomes are not unexpected given:

- the composition of its participants who were distanced from the labour market (and, to us, the unexpectedly high rate at which the matched comparison group left out-of-work benefits);
- the bespoke support offered, with potentially learning by doing over time leading to greater effectiveness of this support; and
- the early point of assessment given the programme was intended to tackle deep seated barriers to employment amongst participants.

This research project was also a test of whether the Propensity Score Matching (PSM) approach could be used to construct a robust impact assessment of the impact of WW on job and off benefit outcomes. This report demonstrates that this was indeed the case. Our two-stage matching approach successfully brought the composition of the final comparison group into line with that of the treated group with not statistically significant differences between the two groups. Hence the difference in outcomes between the two groups could be used as an estimate of the impact of WW.

[21] For more details on permitted work rules see: https://www.gov.uk/employment-support-allowance/eligibility

One limitation of using a PSM approach is that it is only possible to match on observable variable. This means that we cannot rule out the possibility that participants in WW and the matched comparison group differ on unobservable characteristics such as motivation or confidence.

Another similar limitation of the PSM approach is the lack of data on some observable characteristics that are likely to influence an individual's labour market outcomes. In the case of WW, no information was available on the qualifications held or previous occupations of participants or potential comparators. These problems are, at least partly, addressed by our matching of participants and comparators on their previous employment and benefit histories. This ensures that participants and those they are compared with have similar prior labour market experiences, which reduces the chances of there being systematic differences between them. This is because if there were such differences between the two groups, which affected labour market outcomes, then we would expect to see these differences also in their prior labour market history.

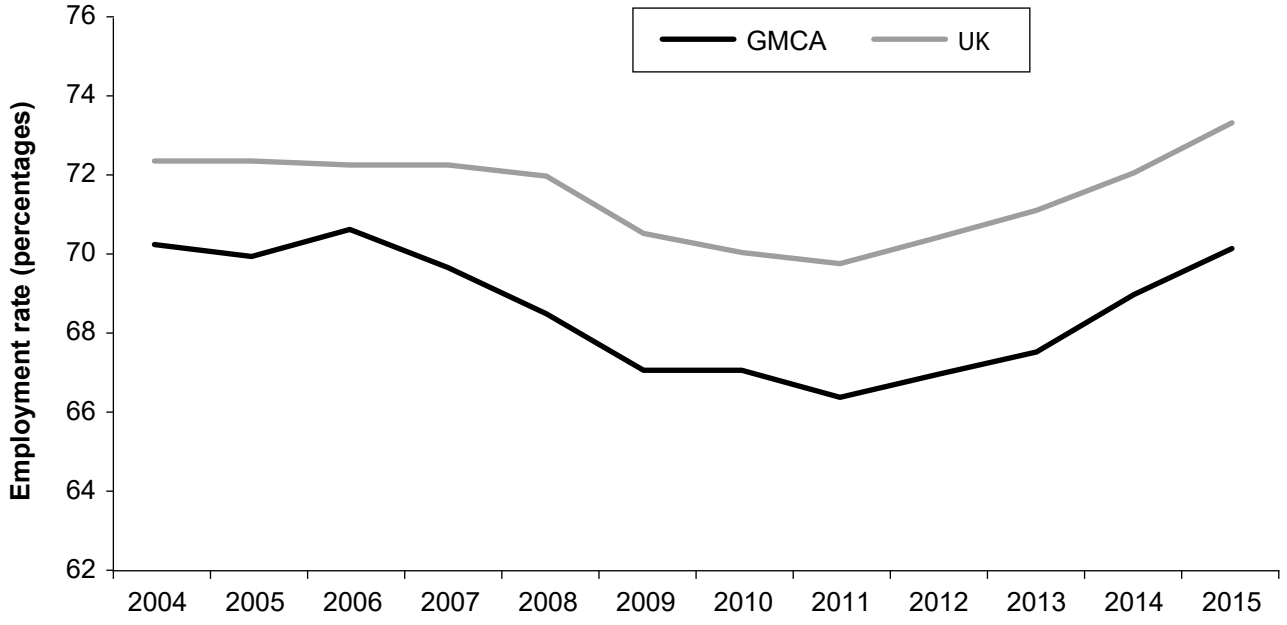
This impact assessment only covers cohorts from the first year and a half of the pilot programme, tracking participants who joined the programme up until August 2015. This meant that we could, at most, only track outcomes for the earliest cohorts (the first joiners) for 52 weeks and most participants for only 26 weeks: a quarter of the time they could spend on the programme. Thus, this evaluation can only provide an impact assessment of the early stages of the programme. Since the programme was designed to tackle long term employment barriers, this early assessment cannot necessarily be used to infer the performance of the programme as a whole. Outcomes observed over a longer period might show a different picture to the ones observed in this early assessment.

Appendix A
Local labour market context

This Appendix sets out the local labour market conditions in Greater Manchester and compares these with those for the UK or GB as a whole in order to provide a context for the assessment of the Working Well (WW) pilot programme.

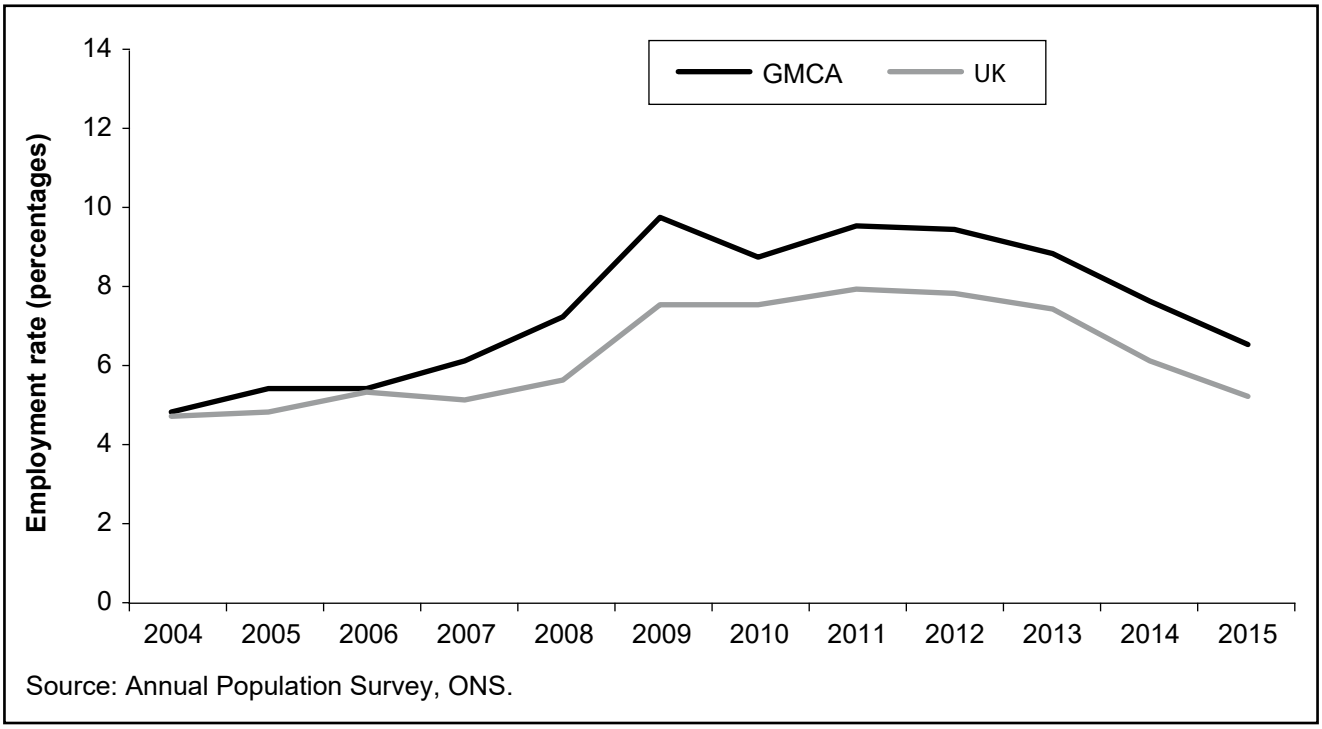
The local labour market context within which WW has operated is a relatively difficult one. Greater Manchester has consistently had a lower working-age employment rate, a higher unemployment rate and a higher working-age economic inactivity rate than the UK as a whole.

Figure A.1 Working-age employment rate GMCA and UK



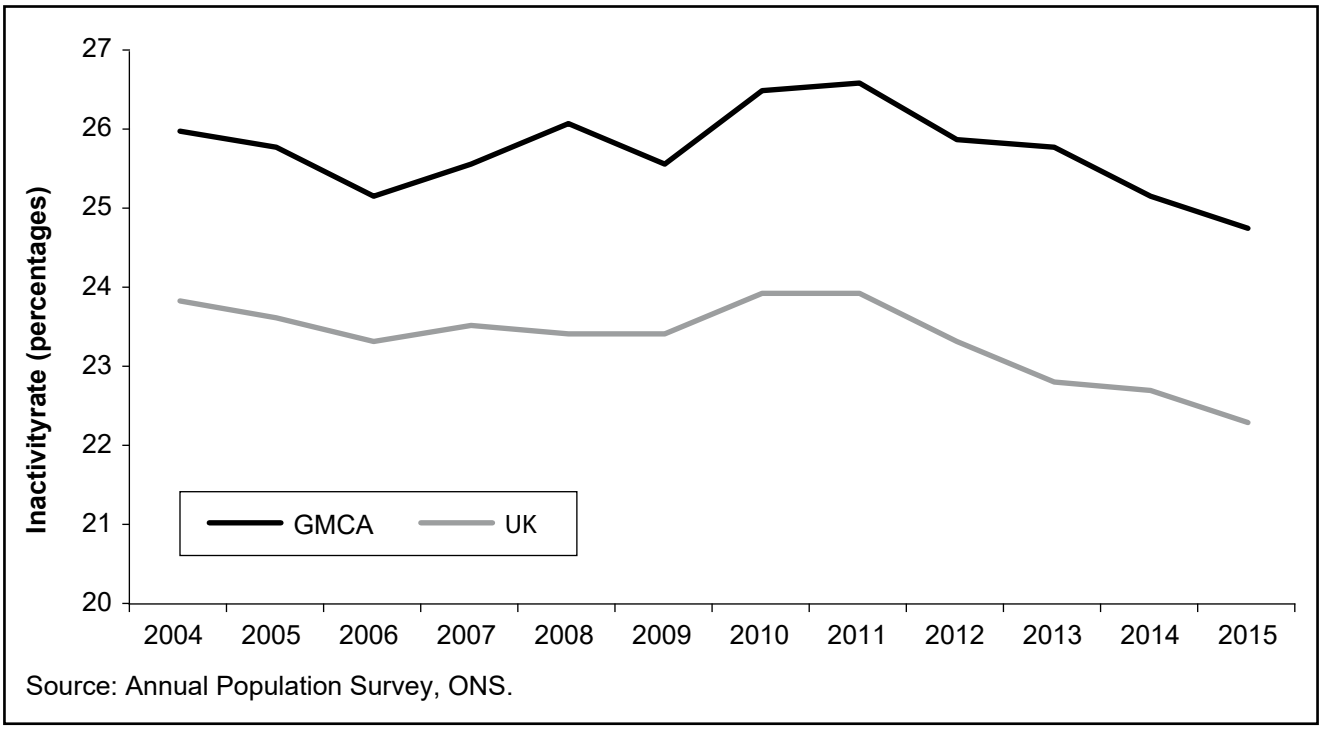
Source: Annual Population Survey, ONS.

Figure A.2 Unemployment rate (16+) GMCA and UK



Source: Annual Population Survey, ONS.

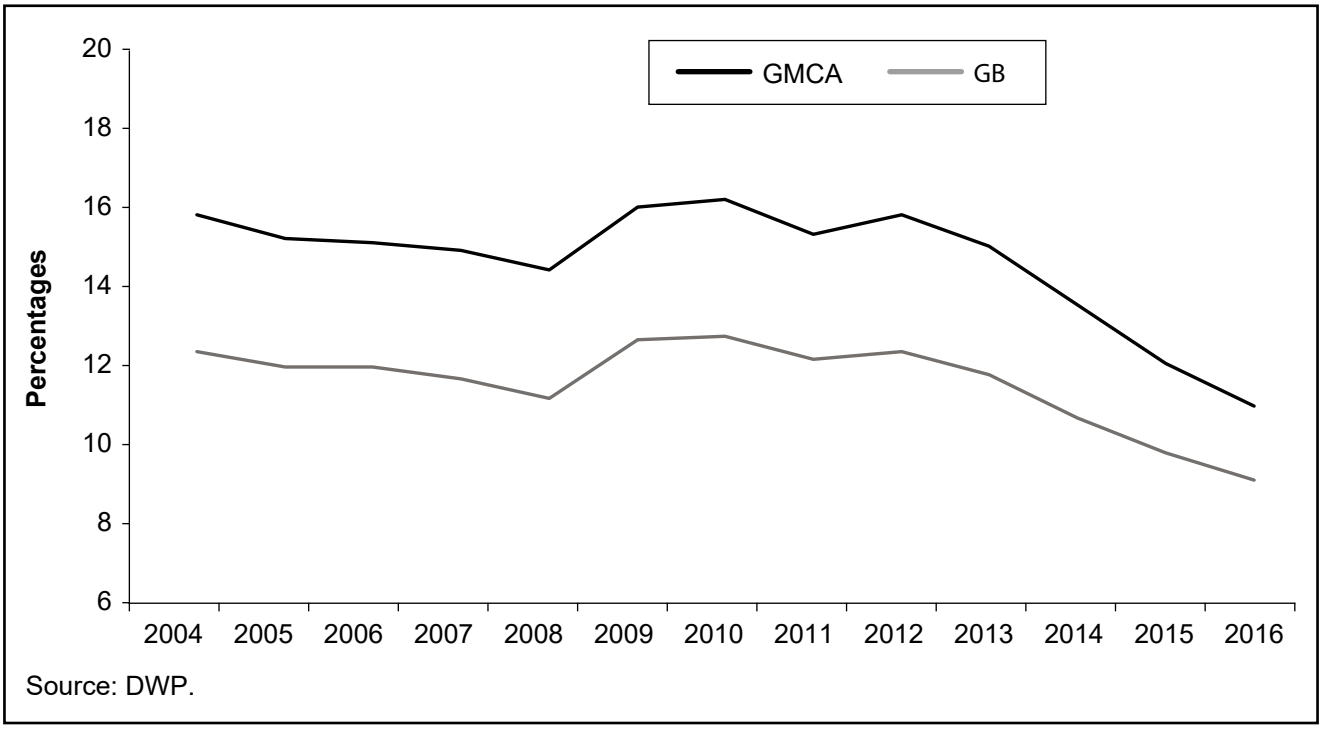
Figure A.3 Working-age inactivity rate GMCA and UK



Source: Annual Population Survey, ONS.

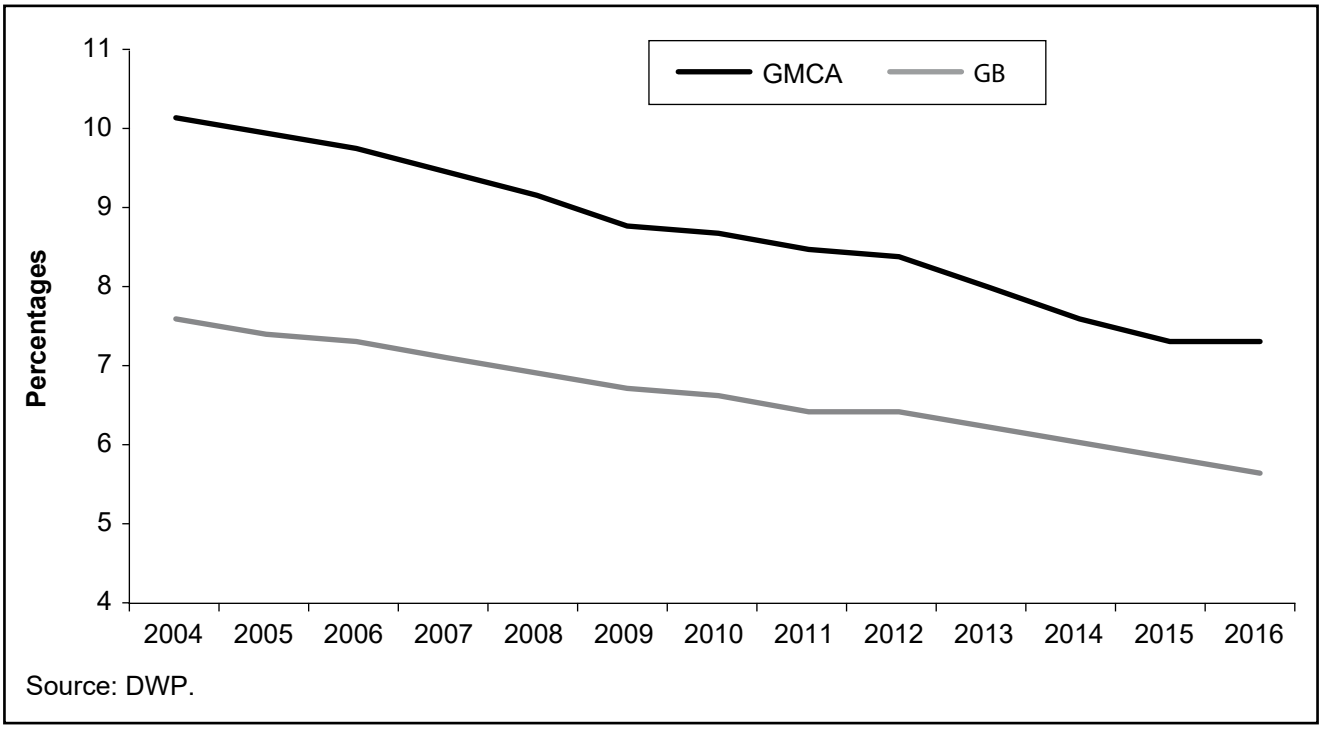
Given these figures, it is not surprising that Greater Manchester has consistently had a higher percentage of its working-age population in receipt of out-of-work benefits and a higher percentage who have been in receipt of out-of-work benefits for at least two years.

Figure A.4 Percentage of residents of working age on out-of-work benefits



Source: DWP.

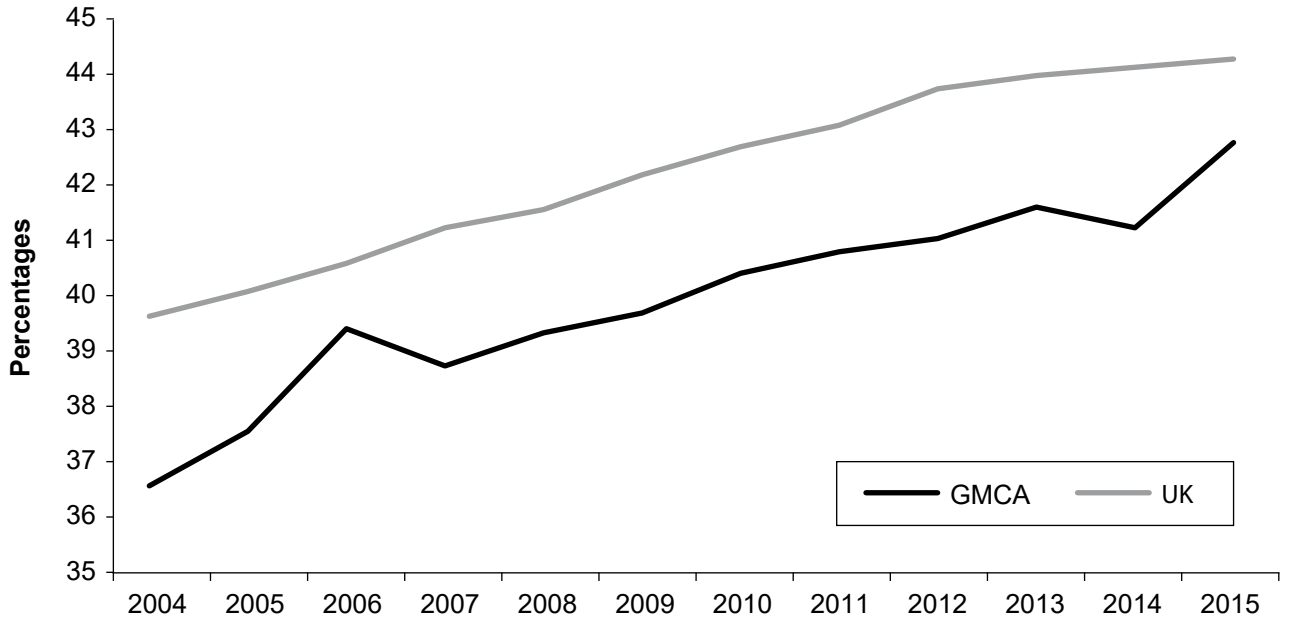
Figure A.5 Percentage of residents of working age on out-of-work benefits for two years or more



Source: DWP.

The composition of employment in Greater Manchester differs from the UK overall. Greater Manchester has consistently had a lower percentage of its working residents in higher-level occupations and a higher percentage in lower-level occupations than the UK overall[22]. Greater Manchester and the UK have had similar percentages in middle-level occupations.

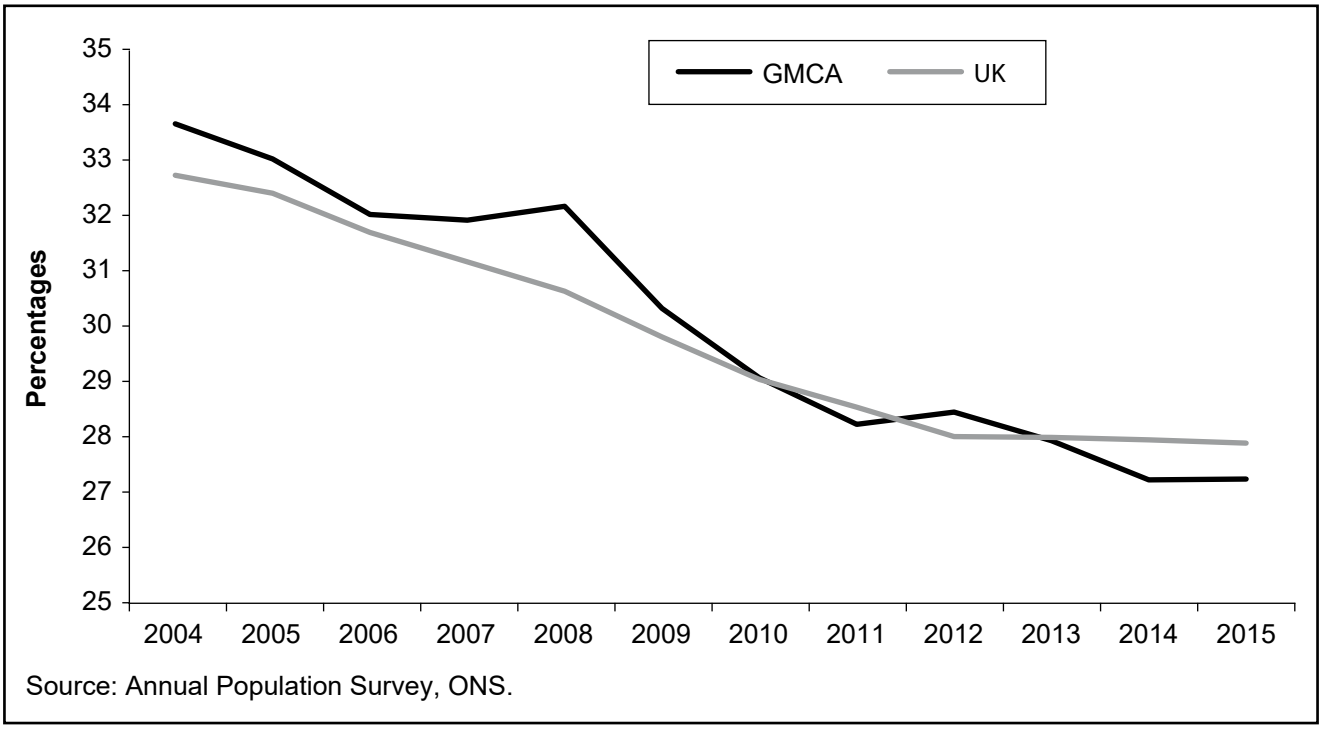
Figure A.6 Percentage of employment in high-level occupations



Source: Annual Population Survey, ONS.

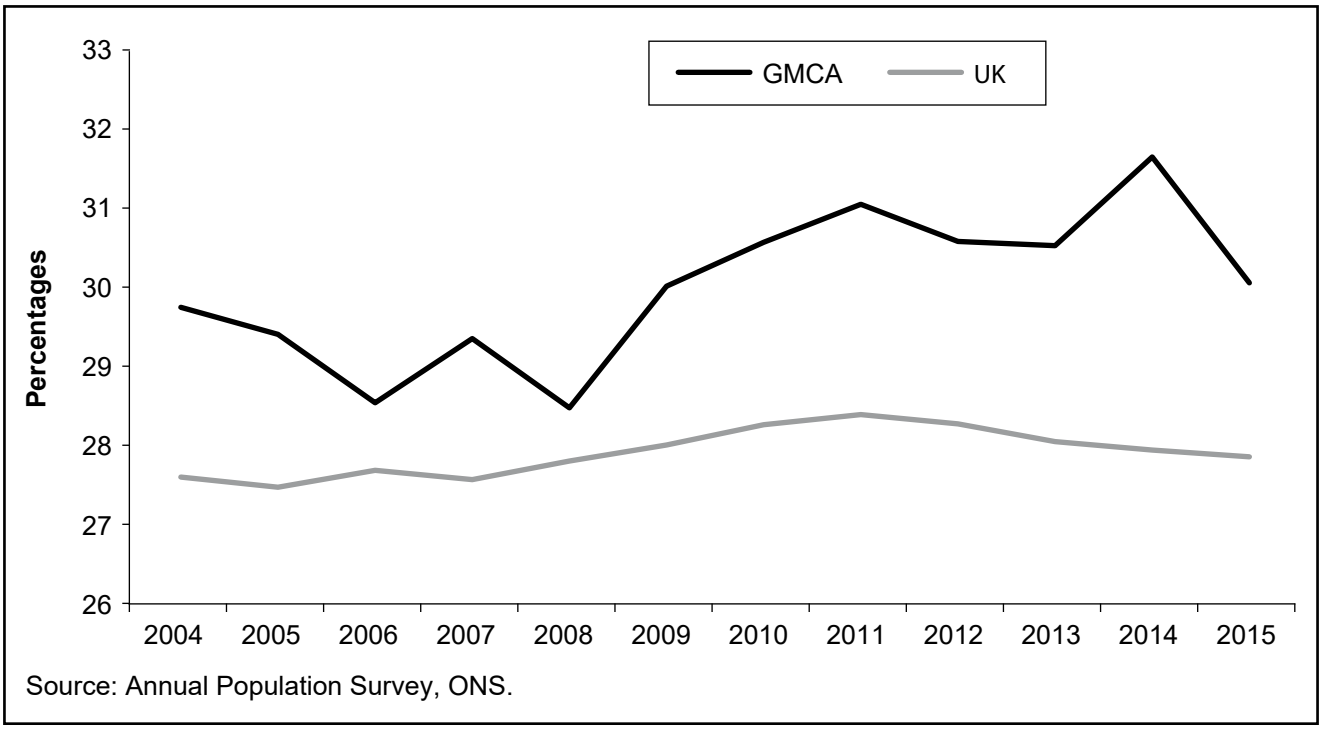
[22] Higher-level occupations are defined on the basis of SOC 2010 as those in major groups 1-3: managers, directors and senior officials, professional occupations and associate professional and technical occupations. Middle-level occupations are defined as those in major groups 4, 5, and 8: administrative and secretarial occupations, skilled trades occupations and process, plant and machine operatives. Lower-level occupations are defined as those in major groups 6, 7, and 9: caring, leisure and other service occupations, sales and customer service occupations and elementary occupations.

Figure A.7 Percentage of employment in middle-level occupations



Source: Annual Population Survey, ONS.

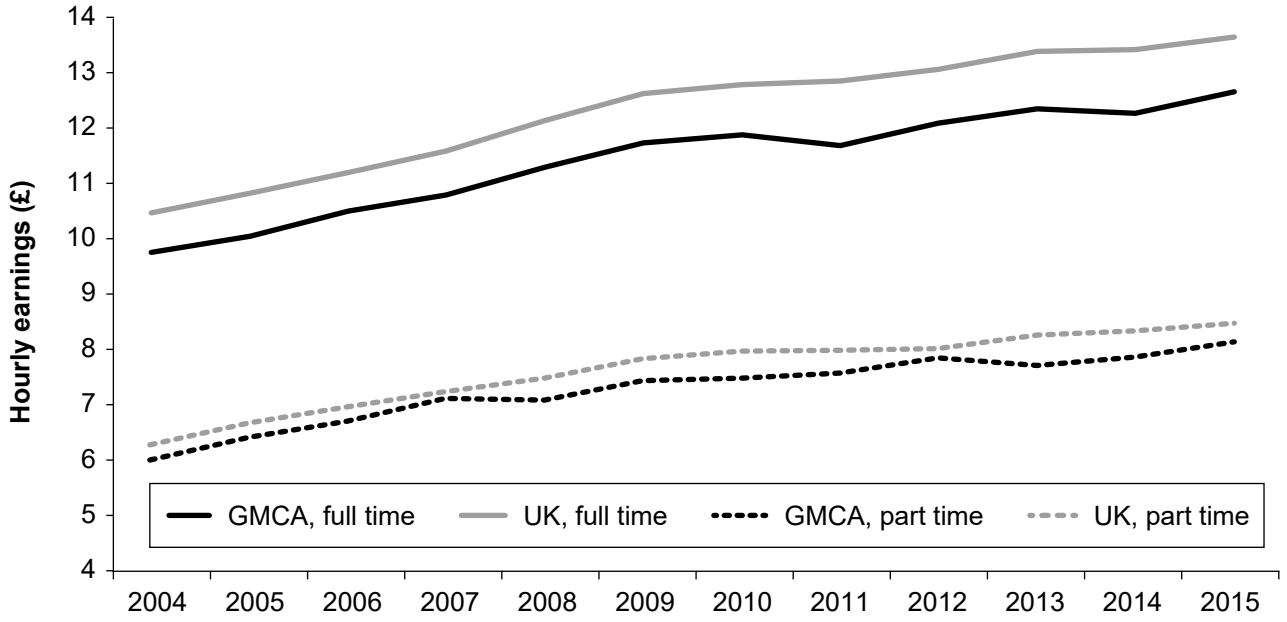
Figure A.8 Percentage of employment in lower-level occupations



Source: Annual Population Survey, ONS.

Given these differences in the composition of employment in, it is not surprising that median hourly earnings are lower in Greater Manchester than in the UK as a whole.

Figure A.9 Median gross hourly earnings: full-time and part-time workers



Source: Annual Survey of Hours and Earnings.

Appendix B
Matching methods

In deciding which particular matching method to use a range of different types of matching analyses were undertaken, with the requirement that the matching method utilised could be used to select a sub-group of the potential comparators for whom the Her Majesty's Revenue and Customs (HMRC) data could then be sought from the Department for Work and Pensions (DWP). This therefore excluded methods that work by constructing a weighting variable that weights the entire potential comparison group to the treated group. Therefore, optimal matching and full matching were excluded as weighting-based methods.

The most conservative method of matching is exact matching, which selects only those cases from both treated and potential comparison groups that match on all measures. This method was tried, and found that a large proportion of the treated group would have been excluded.

A variant of the exact matching method is coarsened exact matching, which (as its name implies) identifies a multivariate distance measure to identify comparison cases that are within a value that may be set by the researcher. This was tried, but it excluded rather too many Working Well (WW) participants. The preferred nearest neighbour method retained all WW participants.

In other studies, the Learning and Work Institute (L&W) has undertaken using matching methods; we have used optimal matching, which defines a weight for each potential comparison group case depending on their distance from the treated group. At a general level, we would prefer this method (or the full matching method, which works similarly, but calculates the weights differently). However, as an objective in this case was to reduce the potential data transfer so that HMRC P45 data was only sought at a second matching stage on a smaller number of comparison cases, methods that worked by weighting the entire potential comparison dataset were excluded.

Appendix C
Matching detailed results

For the sake of completeness, this Appendix includes the results of the two-stage matching process for the variables where the initial unmatched comparison group already appeared to be similar to the treated group of Working Well (WW) participants. These were not reported in Section 3, because there the analysis focused on the variables where the matching process had done most to improve the similarity between the treated and the comparison groups. Also included are details of the formal statistical tests of the effect of the two-stage matching process on the degree of similarity between the treated and comparison groups.

C.1 Results for gender, age, ethnicity and lone parent status

The 'Treated group' column in Tables C.1 and C.2 represents the percentage of participants in WW that fall under the various categories being considered, for example, male or female, or age range groupings. The column 'Potential comparison group' shows the percentage of people in the initial unmatched comparison group that fall under the various categories shown. Similarly, the column 'Final comparison group' shows the percentage of people in the final matched comparison group that results from the two-stage matching process that fall under these categories. The final two columns show the percentage point differences between the treated group of WW participants and the initial unmatched potential comparison group for the characteristics under consideration and then the same percentage point differences between the treated group and the final matched comparison group that results from our two-stage matching process. By reading across the columns in Tables A3.1 and A3.2, we can see the extent of the initial differences in characteristics between the participants in WW (Treated group) and the potential unmatched comparison group and how that difference is (in general) reduced by the two-stage matching process that produces the final matched comparison group.

There are only slightly more females, on average, in the treated group compared to the initial potential comparison group and slightly more people who are aged 55-60 (13 per cent of participants as opposed to 11 per cent in the potential comparison group) and more people aged 60-70 in the potential comparison group (3 per cent as opposed to 1 per cent of participants). Even though the potential comparison group is quite similar to the treated group in terms of both age and gender, the two-stage matching process leads to smaller differences between the final matched comparison group and the treated group. Hence, the matching process leads to a final comparison group which is more like the treated group of WW participants than the initial potential comparison group.

Table C.1 Comparisons of the treated (Working Well participants), potential comparison group and final comparison group: Basic demographics

Demographic characteristics	Treated group	Potential comparison group	Final comparison group	Difference treated – Potential comparison	Difference treated – Final comparison
Females	48%	46%	48%	2%	0%
Males	52%	54%	53%	2%	0%
	100%	100%	100%		
Age <30	17%	20%	17%	2%	0%
Age 30-40	22%	22%	23%	0%	0%
Age 40-45	16%	15%	16%	1%	0%
Age 45-50	17%	16%	17%	2%	0%
Age 50-55	14%	14%	14%	1%	1%
Age 55-60	13%	11%	13%	1%	1%
Age 60-70	1%	3%	1%	2%	0%
	100%	100%	100%		
Not a lone parent	86%	86%	87%	0%	1%
Lone parent	14%	14%	14%	0%	1%
	100%	100%	100%		

Note: The individual categories may not sum exactly to 100 per cent due to rounding.

The data used in the matching process utilised a detailed breakdown of ethnicity into 15 different categories. In Table C.2, we present five summary categories. The potential comparison group (covering the whole of Great Britain) has a similar proportion of people of white ethnicity as the treated group. However, the detail of black and minority ethnic (BAME) groupings is somewhat different with a lower proportion of people with South Asian ethnicities and a higher proportion of people of black ethnicities in the potential comparison group when compared against the treated group. These differences are lower for the final comparison group. Hence, the matching process has also reduced the initial differences between the potential comparison group and the treated group and so made the final comparison group a better fit with the treated group of WW participants.

Table C.2 Comparisons of the treated (Working Well participants), potential comparison group and final comparison group: Ethnicity

Summary ethnicity	Treated group	Potential comparison group	Final comparison group	Difference treated – Potential comparison	Difference treated – Final comparison
White	88%	87%	87%	-1%	0%
Black	2%	3%	2%	2%	0%
South Asian	5%	3%	5%	-2%	0%
Other	3%	4%	2%	1%	-1%
Prefer not to say/ no contact	3%	4%	3%	1%	0%
	100%	100%	100%		

Note: The individual categories may not sum exactly to 100 per cent due to rounding.

C.2 Balance improvement statistical testing

The results shown in Section 3 indicate that the two-stage matching exercise has brought the characteristics of the comparison group much more into line with those of the pilot participants. We tested this proposition further using formal statistical tests.

T and Chi-squared tests

T-tests (for the numeric variables and most of the categorical variables) and a Chi-squared test (for gender) are applied to the difference in characteristics between the treated group and the unmatched comparison group and then between the treated group and the final matched comparison group. Chi-squared tests are often used for categorical variables. However, for most of the categorical variables, we have undertaken t-tests instead for a numeric transformation of the categories which gives each category a numerical value. This approach is used because for nearly all of the categorical variables there are numerous categories but the data is concentrated into just one or a few of these categories. This reduces the effectiveness of the Chi-squared test. The T and the Chi-squared tests test the null hypothesis that the means of the variables in the participant and initial pre-matched/ matched comparison datasets are the same.

The results of this testing are presented in the Table C.3. For some variables in the pre-matched datasets, the t-test values give us p-values (probability values) that are below the standard 5 per cent and 1 per cent levels of significance. This is true for:

- Work Capacity Assessment outcomes;
- whether in receipt of Disability Living Allowance;
- prior out-of-work benefit durations; and
- primary and secondary heath conditions.

Therefore, in these cases we reject the null hypothesis that the pre-matched comparison group and the treated group of WW participants have the same mean for that variable. This means that the pre-matched comparison group and the treated group are not similar with regard to these characteristics. After the two-stage matching exercise, the p-values for all variables, are above the 5 per cent and 1 per cent levels of significance standard levels of significance. Hence, after matching we cannot reject the null hypothesis that the means for all these variables are the same in the participant and matched comparison groups. In turn, this implies that the matched comparison group is a much better fit with the treated group.

Table C.3 T and chi-squared test results

	Pre-matching		Post-final matching	
	Test value	**P-value**	**Test value**	**P-value**
Gender	3.148	0.076	0.012	0.911
Age (categorical)	-0.787	0.432	-1.070	0.944
Age (numerical)	-1.869	0.062*	-0.238	0.812
Work Capability Assessment	17.47	0.000***	1.156	0.248
DLA receipt	-1.982	0.048**	-0.386	0.699
Benefit length (numeric)	-15.297	0.000***	-1.139	0.255
Benefit length (categorical)	-16.256	0.000***	-1.069	0.285
ESA group	1.535	0.125	-0.384	0.701
Lone parent indicator	-0.322	0.748	-0.830	0.407
Ethnicity	1.598	0.111	-1.181	0.857
Primary diagnosis code	5.742	0.000***	0.112	0.911
Secondary diagnosis code	2.355	0.019**	-0.110	0.913

Notes
(1): T-tests were used for all variables apart from gender. For gender, a chi-squared test was undertaken.
(2) * = significant at the ten per cent level, ** = significant at the five per cent level, *** = significant at the 1 per cent level.

Appendix D
Detail of impact assessment results

D.1 Methodology for logistic analysis

In order to assess the net early impact that participation in the Working Well (WW) pilot had on an individual's chances of entering work/exiting out-of-work benefits and of sustaining work/time off out-of-work benefits we created a comparison group of similar Employment and Support Allowance (ESA) claimants during the same time period. As discussed in Section 2, we used a Propensity Score Matching (PSM) approach so that the comparison group matched the characteristics of participants on WW. This was based on a number of characteristics; gender, whether the individual was on Disability Living Allowance (DLA) or not, time in work and benefit duration prior to start on the pilot, age, the primary type of health condition the individual suffers from and the secondary type of health condition (taken from the International Classification of Diseases (ICD) codes), benefit level indicator, and ethnic group the individual belongs to.

The aim is to isolate the impact of the pilot, net of the influence of any confounding factors, i.e. personal characteristics, and prior labour market history. We thus analysed our combined sample of matched pilot participants with the matched comparison group to estimate the net probability of moving off out-of-work benefits/moving into work and of sustaining work. With this comparison group in place, we were able to determine whether participants taking part in the pilot are more or less likely enter work than the comparison group. Job starts are recorded until mid-August 2015. Our single database included the 2,658 participants who started on the WW pilot and the 2,614 individuals in the final matched comparison group.

Logistic regression models were then estimated. This approach models the natural logarithm of the odds ratio as shown in the equation 1 below.

$$\log\left(\frac{\pi}{1-\pi}\right) = \text{logit}(\pi) = \beta 0 + \beta 1 T1 + \beta 2 X2 + \cdots + BnXn \quad (1)$$

In our case, π is the probability of the outcome that is being modelled occurring. We have undertaken regression analyses for a number of outcomes: job entry, job sustainment for various periods of time, movement off out-of-work benefits and sustained periods off out of work benefits of differing lengths.

All of these outcomes are all binary variables which take the value 1 if the outcome occurs (e.g. the individual moves into work) and 0 otherwise (e.g. the individual does not move into work). The explanatory variables (the Xs) include a 'treatment' (labelled T1 in the formula above) variable for participation in WW which takes the value 1 for pilot participants and 0 for the comparison group. We also included the following personal characteristics as explanatory variables: gender, whether the individual was on DLA or not, benefit duration prior to start on the pilot, age, the primary type of health condition the individual suffers from and the secondary type of health condition (taken from the ICD codes), benefit level indicator, and the individuals' ethnicity. Finally, as we had not sought to match WW

participants with a comparison group on the basis of the comparison group being in similar labour markets or local neighbourhoods, we included two local labour market variables in our regressions: the local employment rate[23] and the local median hourly earnings for full-time workers. These were both at the lower local authority level. These two variables are included to pick up any local labour market and, or local neighbourhood impacts on the propensity at which individuals entered or sustained work, or left or remained off out-of-work benefits.

The impact of local labour market conditions is difficult to capture in this analysis. The Travel to Work Area (TTWA) geography has been developed in an attempt to geographically define local labour markets. The standard TTWAs do this for the whole working population. However, WW participants and the matched comparison group are not typical of the working population. The various labour market disadvantages they suffer from means that they have more restricted ability to travel and/or the type of jobs they can obtain reduce the distance and time that it is worth travelling to work for. Hence, the geographical scope of local labour market which is relevant to them will be smaller than standard TTWAs. Greater Manchester, plus some contiguous areas, is mainly covered by one standard TTWA with Wigan in a separate TTWA. Alternative TTWAs have also been developed for different groups within the working population. For example, for part-time workers Greater Manchester is contained within seven such TTWAs, for bus users Greater Manchester is contained within four such TTWAs, and for those with low-level qualifications Greater Manchester is contained within six such TTWAs[24]. The Office for National Statistics (ONS) does not publish data for any of these alternative TTWAs. Hence, we used data for the ten local authorities within Greater Manchester to pick up the impacts of local labour market influences, even though these will only imperfectly match local labour markets in practice.

Data at the local authority level may also reflect neighbourhood as well as local labour market effects. Living in a more deprived area with high rates of worklessness with fewer role models in work, and fewer networking opportunities with people in work, and so fewer informal notifications of job opportunities, can lead to low aspiration and motivation and so adversely affects individuals' chances of entering work.

Whenever one of the explanatory variables is a categorical variable, one of the categories for each characteristic was excluded to avoid perfect multicollinearity. This means that the intercept term in the estimated logistic regression picks up the overall impact for this collection of excluded characteristics which can be thought of as a 'base case'. These excluded characteristics are: female, receiving DLA, in receipt of out-of-work benefits for less than a year, aged under 30 years, with both their primary and secondary health conditions being some form of mental health condition, whose ESA group is unknown, is not a lone parent and is white. The results from these regressions are presented below.

---

23 We also tried using the local unemployment rate in place of the local employment rate. This did not have a material or significant impact on our results and so we retained the employment rate as a wider measure of local labour market/local neighbourhood conditions.

24 Details of the latest TTWAs based on data from the 2011 Census of Population, including alternative TTWAs for different groups within the working population can be found at: http://ons.maps.arcgis.com/apps/MapSeries/index.html?appid=397ccae5d5c7472e87cf0ca766386cc2

D.2 Aggregate results: logistic regressions

D.2.1 Job outcomes

Job entry

The second column of Table D.1 presents the estimated coefficients[25] and p-values[26] for the logistic regression in which the outcome variable is whether the participant was in work at any point during the time period analysed. The treatment variable is positive (0.087) but not statistically significant. Hence, participation in WW does not appear to increase an individual's chances of entering work.

The intercept variable is negative and significant at the 1 per cent level. This indicates that the bundle of base case characteristics noted above have a statistically significant and negative impact on an individual's chances of entering work. The local labour market/ neighbourhood variables are both statistically significant. A higher local employment rate increases an individual's chances of moving into work. This seems intuitively sensible, as one would expect a more buoyant local labour market, and or a neighbourhood where working is more the norm to increase an individual's chances of obtaining employment. This applies both for participants in WW and for the matched group against which they are compared.

However, higher local median earnings reduce an individual's chances of moving into work. In principle, this variable could have a negative or positive impact here given it reflects both local labour demand and local labour supply. If increases in local employment are predominantly driven by increases in local labour supply, then we would see increased employment in the locality going in tandem with reduced wage levels as more workers are available to work at any given local wage level. Conversely, if increases in local employment are predominantly driven by increases in local labour demand then we would see increased employment in the locality going in tandem with increased wage levels as employers are competing more for the available local labour. Thus, on the face of it the negative coefficient for this variable suggests that labour supply effects are mainly driving local employment levels. Alternatively, and possibly more intuitively appealing it may be that this variable is picking up compositional differences across local labour markets. Lower median full-time pay would then reflect a greater frequency of lower level jobs and a lower frequency of higher-level jobs in the local economy. Lower-level jobs are the sort of jobs one might expect both WW participants and the matched comparison group to be more likely to enter. Figures 1.3 and A.6 to A.8 showed that Greater Manchester has a higher share of employment in lower-level occupations and a lower share in higher-level occupations than the UK as a whole, which is consistent with this explanation.

---

[25] The coefficients shown in Table 4.1 and subsequent tables are simply the estimates of the various βi parameters from the logistic regression of the form set out by equation 1 above, rather than for example estimated marginal effects.

[26] One asterisk * means the variable is significant at the ten per cent level of significance, two asterisks (**) that the variable is significant at the five per cent level of significance, and three asterisks (***) that the variable is significant at the 1 per cent level of significance. This notation also applies to subsequent tables.

Relative to the base case of being aged under 30, being older up to 55-60 years has a statistically significant negative impact (at the 1 per cent level) on an individual's chances of entering work. Broadly speaking this negative impact on job entry increases with age. Relative to the base case of mental illness, the ICD category of injury, poisoning and certain other consequences of external causes has a negative impact on job entry. This effect is significant at the ten per cent level. Being of black ethnicity, relative to the base case of being white, has a positive impact on job entry which is significant at the ten per cent level. No other variables included in the regression for job entry are statistically significant.

Table D.1 Early impact of Working Well on job outcomes: job entry, 13-week and 26-week sustainment

Variable	Job Entry	13-week sustainment	26-week sustainment
(Intercept)	-4.853***	-5.469***	-24.780
Treatment	0.087	0.269	0.679**
Employment rate	5.978***	6.176***	7.919***
FT hourly rate	-0.117**	-0.205***	-0.143
Male	0.238*	0.300	0.491*
Not receiving DLA	0.123	0.225	0.364
On out-of-work benefits for 1-2 years	0.009	-0.092	-0.743
On out-of-work benefits for 2-3 years	-0.719	-1.018	-1.734**
On out-of-work benefits for 3-4 years	-0.573	-0.833	-1.190
On out-of-work benefits for 4-5 years	-0.399	-0.612	-1.285
On out-of-work benefits for 5-6 years	-0.753	-1.138	-1.637
On out-of-work benefits for more than 6 years	0.097	0.476	-18.280
Age 30-40	-0.795***	-0.754***	-0.513
Age 40-45	-1.127***	-0.884***	-0.202
Age 45-50	-0.831***	-0.777***	-0.902**
Age 50-55	-0.905***	-0.638**	-0.446
Age 55-60	-1.124***	-1.099***	-1.038*
Age 60-70	-1.224	-0.510	-17.380
Primary health condition: Diseases of the nervous system	0.203	0.516	0.078
Primary health condition: Diseases of the circulatory or respiratory system	0.142	-0.521	-16.560
Primary health condition: Diseases of the musculoskeletal system and connective tissue	0.320	0.710***	0.778**
Primary health condition: Injury, poisoning and certain other consequences of external causes	-0.976*	-0.926	-17.040
Other primary health condition:	0.148	0.341	0.537*
Second health condition: Diseases of the nervous system	-1.632	-0.924	-16.870
Second health condition: Diseases of the circulatory or respiratory system	-0.093	0.443	-0.267

Continued

Table D.1 Continued

Variable	Job Entry	13-week sustainment	26-week sustainment
Second health condition: Diseases of the musculoskeletal system and connective tissue	-0.452	0.0139	0.864*
Second health condition: Injury, poisoning and certain other consequences of external causes	-0.044	0.136	1.113
Other second health condition:	-0.062	0.0264	0.278
ESA assessment	0.254	0.785	16.560
ESA support group	-12.415	-13.966	0.229
ESA WRAG	0.217	0.956*	17.410
Lone parent	0.066	0.286	-0.001
Black	0.779*	0.977**	-17.180
Asian	-0.550	-0.743	-16.970
Mixed	-0.035	0.291	0.554
Other	-0.915	-0.416	-0.029
No information on ethnicity	-0.373	-14.919	-17.230

13-week job sustainment

The third column of Table D.1 presents the estimated coefficients and p-values for the logistic regression in which the outcome variable is whether the participant was in work for at least 13 weeks. The treatment variable is again positive but not statistically significant. Hence, participation in WW does not appear to increase an individual's chances of sustaining work for at least 13 weeks.

The intercept variable is again negative and significant at the 1 per cent level indicating that the bundle of base case characteristics has a statistically significant negative impact on an individual's chances of sustaining work for at least 13 weeks. The local labour market variables are again both statistically significant. A higher local employment rate again increases an individual's chances of sustaining work for 13 weeks. As for job entry, higher local median earnings reduce an individual's chances of sustaining work for at least 13 weeks. As discussed above, we interpret this as reflecting the differing composition of jobs across local labour markets with lower paid jobs being the ones that WW participants and the matched comparison group are more likely to be able to enter. Relative to the base case of being aged under 30, being older up to 55-60 years has a statistically significant negative impact on an individual's chances of sustaining working for 13 weeks or more. Unlike for job entry there does not appear to be a clear relationship between becoming older (after 30 years) and an individual's chances of sustaining work for 13 weeks. Relative to the base case of mental illness, the ICD category of diseases of the musculoskeletal system and connective tissue has a positive and statistically significant impact on an individual's chances of sustaining work for 13 weeks. Being categorised as ESA Work Related Activity Group (WRAG) has a positive impact on 13-week job sustainment which is significant at the ten per cent level. Being of black ethnicity, relative to the base case of being white, has a positive and statistically significant impact on 13-week job sustainment. No other variables included in the regression for 13-week job sustainment are statistically significant.

26-week job sustainment

The final column of Table A4.1 presents the estimated coefficients and p-values for the logistic regression in which the outcome variable is whether the participant was in work for at least 26 weeks. The treatment variable is positive and for this length of job sustainment statistically significant at the five per cent level. Hence, participation in WW increases an individual's chances of sustaining work for at least 26 weeks. A higher local employment rate has a positive and statistically significant impact at the 1 per cent level on an individual's chances of sustaining work for 26 weeks. Being male rather than female has a positive impact on an individual's chances of sustaining work for 26 weeks. This impact is statistically significant at the ten per cent level.

Relative to the base case of being aged under 30, being aged 45-50 years has a statistically significant negative impact at the five per cent level on an individual's chances of sustaining working for 26 weeks or more. In addition, being aged 55-60 years has a negative impact on an individual's chances of sustaining working for 26 weeks or more. This impact is statistically significant at the ten per cent level. Relative to the base case of mental illness, the ICD category of diseases of the musculoskeletal system and connective tissue has a positive and statistically significant impact on an individual's chances of sustaining work for 26 weeks. The other primary health condition (a category covering a range of different health conditions) also has a positive impact on an individual's chances of sustaining work for 26 weeks, which is statistically significant at the ten per cent level. The secondary health condition of diseases of the musculoskeletal system and connective tissue has a positive impact on an individual's chances of sustaining work for 26 weeks, which is also statistically significant at the ten per cent level. No other variables included in the regression for 13-week job sustainment are statistically significant. The regression results for 26-week job sustainment are based on only a small number of cases: 43 in treatment group and 26 in the matched comparison group. Hence, the results may be less robust than for job entry or 13-week job sustainment.

D.2.2 Off benefit outcomes

Any time off out-of-work benefits

As well as jobs impacts we investigated the potential early impact of WW on time spent off out-of-work benefits (ESA, Jobseeker's Allowance (JSA) and Income Support (IS)). Firstly, we assessed any break in the receipt of out-of-work benefits after the programme start date. Table D.2 shows the logistic regression results with this as the dependent variable. The treatment variable is negative but not statistically significant indicating that participation in WW does not appear to increase an individual's chances of moving off out-of-work benefits. A higher local employment rate has a positive impact on an individual's chances of spending any time off out-of-work benefits. This impact is statistically significant at the ten per cent level. Men are more likely to move off out-of-work benefits than women, and this impact is statistically significant at the 1 per cent level. Compared to the base case of being on out-of-work benefits for less than a year before 'participation', being on out-of-work benefits for 4-5 years or 5-6 years both have a negative impact on time spent off benefits. Both of these impacts are significant at the five per cent level. Relative to the base case of being aged under 30, being in an older age group up to the 55-60 age group has a negative impact on an individual's chances of spending any time off out-of-work benefits. For all these age groups, these impacts are significant at the 1 per cent level. The negative impact of age on spending any time off out-of-work benefits increases with older age groups from 30-40

to 55-60. Being aged 60-70 has a positive impact on an individual's chances of spending any time off out-of-work benefit which presumably reflects their retirement. Compared to the base case of mental illness conditions, having a disease of the nervous system as a primary health condition has a negative impact on an individual's chances of spending any time off out-of-work benefits, which is significant at the ten per cent level. In contrast, injury, poisoning and certain other consequences of external causes has a positive impact on an individual's chances of spending any time off out-of-work benefits. This impact is also significant at the ten per cent level.

Table D.2 Early impact of Working Well on any time spent off out-of-work benefits

Variable	Any time off	One week off	13 weeks off
(Intercept)	-1.129	-1.400*	-3.092***
Treatment	-0.064	-0.019	-0.163
Employment rate	1.280*	1.415*	3.325***
FT hourly wage rate	-0.005	0.000	-0.044
Male	0.259***	0.278***	0.140
Not receiving DLA	0.025	-0.009	-0.032
On out-of-work benefits for 1-2 years	0.136	0.157	0.431
On out-of-work benefits for 2-3 years	-0.350	-0.399	-0.522
On out-of-work benefits for 3-4 years	-0.236	-0.280	-0.290
On out-of-work benefits for 4-5 years	-1.155**	-1.246***	-0.978
On out-of-work benefits for 5-6 years	-1.395**	-1.626***	-0.966
On out-of-work benefits for more than 6 years	-0.142	-0.108	0.319
Age 30-40	-0.484***	-0.442***	-0.407***
Age 40-45	-0.521***	-0.498***	-0.580***
Age 45-50	-0.556***	-0.543***	-0.559***
Age 50-55	-0.725***	-0.667***	-0.773***
Age 55-60	-0.815***	-0.798***	-0.721***
Age 60-70	0.976**	1.077***	1.677***
Primary health condition: Diseases of the nervous system	-0.323*	-0.275	-0.060
Primary health condition: Diseases of the circulatory or respiratory system	-0.178	-0.098	0.276
Primary health condition: Diseases of the musculoskeletal system and connective tissue	0.010	0.001	0.169
Primary health condition: Injury, poisoning and certain other consequences of external causes	0.285*	0.340**	0.511**
Other primary health condition:	-0.068	-0.054	0.151
Second health condition: Diseases of the nervous system	-0.284	-0.305	-0.208
Second health condition: Diseases of the circulatory or respiratory system	0.326	0.291	0.389

Continued

Table D.2 Continued

Variable	Any time off	One week off	13 weeks off
Second health condition: Diseases of the musculoskeletal system and connective tissue	0.086	0.103	-0.059
Second health condition: Injury, poisoning and certain other consequences of external causes	-0.027	0.034	0.218
Other second health condition:	-0.111	-0.130	-0.172
ESA assessment	-0.162	-0.078	-0.370
ESA support group	0.453	0.577	0.182
ESA WRAG	-0.094	-0.029	0.0289
Lone parent	0.021	0.060	-0.111
Black	0.016	-0.077	0.415
Asian	0.053	0.078	-0.063
Mixed	0.148	0.222	0.639*
Other	-0.670	-0.816*	0.014
No information on ethnicity	-0.362*	-0.332	-0.391

One week off out-of-work benefits

Table D.2 shows the regression results for the early impact of WW on being off out-of-work benefits for at least one week. This regression was run to account for possible administrative effects connected with claiming benefits (a change in benefit status may take a few days to materialise for administrative reasons) and this would then show up as an apparent few days off benefit. The treatment variable is negative but not statistically significant indicating that participation in WW does not appear to affect an individual's chances of moving off out-of-work benefits for at least a week. The intercept variable is negative and significant at the ten per cent level indicating that the bundle of base case characteristics has a statistically significant negative impact on an individual's chances of spending at least a week off out-of-work benefits. Men are more likely than women to move off out-of-work benefits for at least a week and this impact is statistically significant at the 1 per cent level. Compared to the base case of being on out-of-work benefits for less than a year before 'participation', being on out-of-work benefits for 4-5 years or 5-6 years both have a negative impact on being off out-of-work benefits for at least a week. Both of these impacts are significant at the 1 per cent level. Relative to the base case of being aged under 30, being aged 40 to 60 has a negative impact on an individual's chances of spending at least a week off out-of-work benefits. For all these age groups, these impacts are significant at the 1 per cent level. The negative impact of age on being off out-of-work benefits for at least a week increases with the older age groups from 30-40 to 55-60. Being aged 60-70 has a positive impact on an individual's chances of spending at least a week off out-of-work benefits which is significant at the 1 per cent level and presumably reflects retirement. Compared to the base case of mental illness conditions, having Injury, poisoning or certain other consequences of external causes as a primary health condition has a positive and statistically significant (at the five per cent level) impact on an individual's chances of spending at least a week off out-of-work benefits.

Finally, being of other ethnic origin (i.e. not of black, Asian, or mixed ethnic origin) relative to the base characteristic of being white has a negative impact on an individual's chances of spending at least a week off out-of-work benefits. This impact is significant at the ten per cent level. No other variables in this logistic regression have a statistically significant impact on the chances of spending at least a week off out-of-work benefits.

Thirteen weeks off out-of-work benefits

Table D.2 shows the regression results for the impact of WW on being off out-of-work benefits for at least 13 weeks. The treatment variable is negative, but not statistically significant indicating that participation in WW does not appear to affect an individual's chances of moving off out-of-work benefits for at least 13 weeks. The intercept variable is negative and significant at the 1 per cent level indicating that the bundle of base case characteristics has a statistically significant negative impact on an individual's chances of spending at least 13 weeks off out-of-work benefits. Relative to the base case of being aged under 30, being aged 40 to 60 has a negative impact on an individual's chances of spending at least 13 weeks off out-of-work benefits. All these negative impacts are significant at the 1 per cent level. The negative impact of age on being off out-of-work benefits for at least 13 weeks increases with the older age groups from 30-40 to 55-60. Being aged 60-70 has a positive impact on an individual's chances of spending 13 weeks off out-of-work benefit which is significant at the 1 per cent level and presumably reflects retirement. Compared to the base case of mental illness conditions, Injury, poisoning or certain other consequences of external causes has a positive and statistically significant (at the five per cent level) impact on an individual's chances of spending at least 13 weeks off out-of-work benefits. Finally, being of mixed ethnic origins relative to the base characteristic of being white has a positive impact on an individual's chances of spending at least 13 weeks off out-of-work benefits. This impact is significant at the ten per cent level. No other variables in this logistic regression have a statistically significant impact on the chances of spending at least 13 weeks off out-of-work benefits.

Twenty-six weeks off out-of-work benefits

Table D.3 shows the regression results for the early impact of WW on being off out-of-work benefits for at least 26 weeks. The treatment variable is negative but not statistically significant indicating that participation in WW does not appear to affect an individual's chances of moving off out-of-work benefits for at least 26 weeks. The intercept variable is negative and significant at the 1 per cent level indicating that the bundle of base case characteristics has a statistically significant negative impact on an individual's chances of spending at least 26 weeks off out-of-work benefits. Relative to the base case of being aged under 30, being aged 40 to 45 and 55-60 have negative impact on an individual's chances of spending at least 26 weeks off out-of-work benefits. These two negative impacts are significant at the five per cent level and 1 per cent level respectively. Being aged 60-70 has a positive impact on an individual's chances of spending 26 weeks off out-of-work benefits, which is significant at the 1 per cent level and presumably reflects retirement.

Compared to the base case of mental illness conditions, diseases of the musculoskeletal system and connective tissue has a positive and statistically significant (at the five per cent level) impact on an individual's chances of spending at least 26 weeks off out-of-work benefits. Similarly, other primary health conditions apart from those explicitly included in the other primary health condition categories also has a positive and statistically significant impact on an individual's chances of spending at least 26 weeks off out-of-work benefits.

This impact is significant at the 1 per cent level. Two secondary health conditions: Injury, poisoning and certain other consequences of external causes, and other secondary health conditions also have a positive impact relative to mental illness secondary health conditions. Both these effects are significant at the ten per cent level. Finally, being in the ESA Support Group increases an individual's chances of spending at least 26 weeks off out-of-work benefits. This impact is significant at the 1 per cent level. No other variables in this logistic regression have a statistically significant impact on the chances of spending at least 26 weeks off out-of-work benefits.

Table D.3 Early impact of Working Well on the chances of spending at least 26 weeks off out-of-work benefits

Variable	26 weeks off	39 weeks off	52 weeks off
(Intercept)	-6.481***	-7.475***	-8.082**
Treatment	-0.114	-0.083	0.101
Employment rate	2.537	1.218	5.185
FT hourly wage rate	0.019	0.041	0.009
Male	-0.047	-0.480	-0.778
Not receiving DLA	0.071	0.606	-0.386
On out-of-work benefits for 1-2 years	1.341	0.906	0.325
On out-of-work benefits for 2-3 years	-0.040	-0.582	-1.178
On out-of-work benefits for 3-4 years	0.384	-0.077	-1.599
On out-of-work benefits for 4-5 years	0.415	-0.116	-0.998
On out-of-work benefits for 5-6 years	-0.926	-15.401	-17.337
On out-of-work benefits for more than 6 years	-11.696	-15.009	-17.481
Age 30-40	-0.422	-0.321	0.0102
Age 40-45	-0.707**	-0.606	-0.403
Age 45-50	-0.435	-0.927*	-0.615
Age 50-55	-0.513	-0.746	-0.678
Age 55-60	-1.041***	-1.154*	-1.456
Age 60-70	2.407***	2.951***	2.569**
Primary health condition: Diseases of the nervous system	0.200	0.765	0.837
Primary health condition: Diseases of the circulatory or respiratory system	0.238	1.030	1.519*
Primary health condition: Diseases of the musculoskeletal system and connective tissue	0.585**	0.858**	-0.303
Primary health condition: Injury, poisoning and certain other consequences of external causes	0.231	-0.391	-15.362
Other primary health condition:	0.655***	0.603	0.846
Second health condition: Diseases of the nervous system	0.913	0.850	0.680

Continued

Table D.3 Continued

Variable	26 weeks off	39 weeks off	52 weeks off
Second health condition: Diseases of the circulatory or respiratory system	0.799	-15.129	-16.141
Second health condition: Diseases of the musculoskeletal system and connective tissue	0.158	0.218	-15.703
Second health condition: Injury, poisoning and certain other consequences of external causes	1.125*	0.997	-15.112
Other second health condition:	0.445*	0.374	0.618
ESA assessment	-0.201	0.637	-0.237
ESA Support Group	2.116***	2.930	2.938*
ESA WRAG	0.545	1.658	0.662
Lone parent	-0.389	-0.199	-0.229
Black	-0.858	-15.095	-16.137
Asian	-0.729	-0.371	-16.091
Mixed	0.556	-0.115	-16.276
Other	-0.304	-15.108	-16.227
No information on ethnicity	-0.712	-0.722	0.0665

Thirty-nine weeks off out-of-work benefits

Table D.3 shows the regression results for the early impact of WW on being off out-of-work benefits for at least 39 weeks. The treatment variable is negative but not statistically significant indicating that participation in WW does not appear to affect an individual's chances of moving off out-of-work benefits for at least 39 weeks. The intercept variable is negative and significant at the 1 per cent level indicating that the bundle of base case characteristics has a statistically significant negative impact on an individual's chances of spending at least 39 weeks off out-of-work benefits.

Relative to the base case of being aged under 30, being aged 40 to 45 and 55-60 have negative impact on an individual's chances of spending at least 39 weeks off out-of-work benefits. These two negative impacts are significant at the ten per cent level. Being aged 60-70 has a positive impact on an individual's chances of spending 39 weeks off out-of-work benefits which is significant at the 1 per cent level and presumably reflects retirement.

Compared to the base case of mental illness conditions, diseases of the musculoskeletal system and connective tissue has a positive and statistically significant (at the five per cent level) impact on an individual's chances of spending at least 39 weeks off out-of-work benefits. Finally, being in the ESA Support Group increases an individual's chances of spending at least 39 weeks off out-of-work benefits. This impact is significant at the five per cent level. No other variables in this logistic regression have a statistically significant impact on the chances of spending at least 39 weeks off out-of-work benefits.

Fifty-two weeks off out-of-work benefits

Table A4.3 shows the regression results for the early impact of WW on being off out-of-work benefits for at least 52 weeks. The treatment variable is positive, but not statistically significant indicating that participation in WW does not appear to affect an individual's chances of moving off out-of-work benefits for at least 52 weeks. The intercept variable is negative and significant at the five per cent level indicating that the bundle of base case characteristics has a statistically significant negative impact on an individual's chances of spending at least 52 weeks off out-of-work benefits. Relative to the base case of being aged under 30, being aged 60-70 has a positive impact on an individual's chances of spending 52 weeks off out-of-work benefits which is significant at the five per cent level presumably reflecting retirement.

Compared to the base case of mental illness conditions, diseases of the circulatory or respiratory system have a positive impact on an individual's chances of spending at least 52 weeks off out-of-work benefits. This effect is significant at the ten per cent level. Finally, being in the ESA Support Group increases an individual's chances of spending at least 52 weeks off out-of-work benefits. This impact is significant at the ten per cent level. No other variables in this logistic regression have a statistically significant impact on the chances of spending at least 52 weeks off out-of-work benefits.

D.2.3 Job outcomes by provider

As noted in Section 1, two providers, Ingeus and Big Life, were contracted to deliver WW in Greater Manchester: Big Life in: Manchester City, Salford and Trafford; and Ingeus in Bolton, Bury, Oldham, Rochdale, Stockport, Tameside, and Wigan. We undertook similar logistic regression analysis to that set out above for WW as a whole for the two providers separately. The results of these analyses are set out in this sub-section. However, we do not separately identify the two providers in this analysis. They are simply denoted as Provider SA and Provider B.

Table D.4 sets out the regressions results for the two providers for job entry. The most interesting point to note is that while the treatment variable for Provider A is negative, but not statistically significant that for Provider B is positive and significant at the ten per cent level. Hence, there is some evidence that the Provider B provision was more effective at helping WW participants enter work than that by provided by Provider A.

Being aged 30 to 60 relative to the base case of being aged under 30 has a negative and statistically significant (at the 1 per cent level) impact on job entry for the clients of both providers and their respective comparison groups. For Provider B clients and their comparison group a higher local employment rate has a positive and statistically significant impact (at the 1 per cent level) on job entry, which is not the case for Provider A. For Provider B clients and their comparison group, the intercept term is negative and significant at the 1 per cent level indicating that the bundle of characteristics in the base case has a negative impact on job entry; again, this is not the case for Provider A. Finally, diseases of the circulatory or respiratory system have a positive impact (significant at the ten per cent level) on job entry relative to the base case of mental health conditions for Provider A and their comparison group but not for Provider B.

Table D.4 Early impact on job entry by provider

Variable	Provider A	Provider B
(Intercept)	-3.050	-4.808***
Treatment	-0.270	0.294*
Employment rate	2.655	5.124***
FT hourly wage rate	-0.067	-0.121
Male	0.311	0.199
Not receiving DLA	-0.115	0.286
On out-of-work benefits for 1-2 years	0.382	0.178
On out-of-work benefits for 2-3 years	-0.837	-0.152
On out-of-work benefits for 3-4 years	-0.673	0.062
On out-of-work benefits for 4-5 years	-0.693	0.200
On out-of-work benefits for 5-6 years	-1.077	-0.517
On out-of-work benefits for more than 6 years	-16.820	0.702
Age 30-40	-0.924***	-0.886***
Age 40-45	-1.410***	-1.224***
Age 45-50	-1.034***	-0.758***
Age 50-55	-1.384***	-0.781***
Age 55-60	-2.194***	-1.100***
Age 60-70	-17.220	-15.116
Primary health condition: Diseases of the nervous system	-0.043	0.079
Primary health condition: Diseases of the circulatory or respiratory system	1.070*	0.011
Primary health condition: Diseases of the musculoskeletal system and connective tissue	0.238	0.382
Primary health condition: Injury, poisoning and certain other consequences of external causes	-16.430	-0.583
Other primary health condition:	0.315	0.052
Second health condition: Diseases of the nervous system	-16.180	-14.565
Second health condition: Diseases of the circulatory or respiratory system	0.527	-1.385
Second health condition: Diseases of the musculoskeletal system and connective tissue	-0.809	-0.162
Second health condition: Injury, poisoning and certain other consequences of external causes	0.622	-0.096
Other second health condition:	0.0120	-0.055
ESA assessment	0.946	0.152
ESA Support Group	-15.680	-14.667
ESA WRAG	0.412	0.018
Lone parent	0.002	0.051

Continued

Table D.4 Continued

Variable	Provider A	Provider B
Black	0.244	0.708
Asian	-0.927	-0.775
Mixed	-0.999	0.074
Other	-16.100	-14.567
No information on ethnicity	-0.706	0.145

Table D.5 sets out the regressions results for the two providers for 13-week job sustainment. Again, the treatment variable for Provider A is negative but not statistically significant while that for Provider B is positive and significant this time at the five per cent level. Hence, Provider B' WW provision appears more likely to assist participants to sustain work for 13 weeks than that provided by Provider A.

Being aged over 30 relative to the base case of being aged under 30 has a negative impact on 13-week job sustainment. More of these age variables are significant at least the ten per cent level for Provider B compared to Provider A. Again, for Provider B clients and their comparison group a higher local employment rate has a positive and statistically significant impact (at the five per cent level) on 13-week job entry sustainment which is not the case for Provider A. Finally, diseases of the circulatory or respiratory system have a positive impact (significant at the ten per cent level) on job entry relative to the base case of mental health conditions for Provider A and their comparison group. While for Provider B, it is diseases of the musculoskeletal system and connective tissues that have a positive impact (at the five per cent level) on 13-week job sustainment.

Table D.5 Early impact on 13-week job sustainment by provider

Variable	Provider A	Provider B
(Intercept)	-21.530	-21.740
Treatment	-0.001	0.513**
Employment rate	3.716	5.636**
FT hourly wage rate	-0.133	-0.147
Male	0.513	0.350
Not receiving DLA	0.510	0.198
On out-of-work benefits for 1-2 years	17.680	15.400
On out-of-work benefits for 2-3 years	16.010	14.860
On out-of-work benefits for 3-4 years	16.230	15.160
On out-of-work benefits for 4-5 years	16.180	15.360
On out-of-work benefits for 5-6 years	-0.271	15.140
On out-of-work benefits for more than 6 years	-0.933	16.620
Age 30-40	-0.760*	-0.766**
Age 40-45	-0.805	-0.789**
Age 45-50	-0.969*	-0.566*
Age 50-55	-0.929	-0.445
Age 55-60	-2.111**	-1.111**
Age 60-70	-16.660	-15.440

Continued

Table D.5 Continued

Variable	Provider A	Provider B
Primary health condition: Diseases of the nervous system	0.763	0.332
Primary health condition: Diseases of the circulatory or respiratory system		
	-16.020	-0.165
Primary health condition: Diseases of the musculoskeletal system and connective tissue	-0.028	0.634**
Primary health condition: Injury, poisoning and certain other consequences of external causes	-16.620	-0.715
Other primary health condition:	0.529	-0.232
Second health condition: Diseases of the nervous system	-16.360	-14.850
Second health condition: Diseases of the circulatory or respiratory system	1.349*	-0.719
Second health condition: Diseases of the musculoskeletal system and connective tissue	-0.540	0.363
Second health condition: Injury, poisoning and certain other consequences of external causes	0.626	-0.267
Other second health condition:	0.303	-0.003
ESA assessment	0.363	1.021
ESA Support Group	-16.380	-14.090
ESA WRAG	0.145	0.912
Lone parent	0.034	0.297
Black	0.669	0.528
Asian	-0.031	-0.940
Mixed	-0.252	0.730
Other	-16.200	-15.010
No information on ethnicity	-16.620	-14.940

The low extent of job sustainment for 26 week and longer periods meant that it was not possible to successfully model these outcomes separately by provider.

D.2.4 Off out-of-work benefit outcomes by provider

Table D.6 sets out the regressions results for the two providers for any time spent off out-of-work benefits. The treatment variable for Provider A is negative, but not statistically significant while that for Provider B is positive but also not statistically significant.

Other regression results of interest are that being male has a positive and statistically significant impact on the chances of spending any time off out-of-work benefits for both the Provider B (at five per cent level) and Provider A (at 1 per cent level) cases. Being on out-of-work benefits for longer than four years prior to participation has a negative impact on spending any time off out-of-work benefits for the clients of both providers. These impacts are both significant at the ten per cent level. Being aged 30-60 relative to the base case of being aged under 30 has a negative and statistically significant impact on any time off out-of-work benefits for the clients of both providers. For the age groups 30-40 and 40-45 these impacts have a higher degree of statistical significance in the case of Provider B than Provider A.

Table D.6 Early impact on any time off out-of-work benefits by provider

Variable	Provider A	Provider B
(Intercept)	-0.413	-0.672
Treatment	-0.044	0.129
Employment rate	0.029	-0.321
FT hourly wage rate	-0.007	0.045
Male	0.358***	0.207**
Not receiving DLA	0.276	0.020
On out-of-work benefits for 1-2 years	-0.033	0.283
On out-of-work benefits for 2-3 years	-0.453	-0.289
On out-of-work benefits for 3-4 years	-0.329	-0.167
On out-of-work benefits for 4-5 years	-1.201*	-0.963*
On out-of-work benefits for 5-6 years	-1.644*	-1.106*
On out-of-work benefits for more than 6 years	-0.240	-0.582
Age 30-40	-0.313*	-0.576***
Age 40-45	-0.396**	-0.562***
Age 45-50	-0.494***	-0.612***
Age 50-55	-0.751***	-0.824***
Age 55-60	-1.161***	-0.814***
Age 60-70	-0.112	1.152**
Primary health condition: Diseases of the nervous system	-0.683**	-0.280
Primary health condition: Diseases of the circulatory or respiratory system	-0.295	0.044
Primary health condition: Diseases of the musculoskeletal system and connective tissue	0.005	-0.026
Primary health condition: Injury, poisoning and certain other consequences of external causes	0.099	0.370*
Other primary health condition:	-0.133	-0.078
Second health condition: Diseases of the nervous system	0.066	-0.710*
Second health condition: Diseases of the circulatory or respiratory system	0.364	0.295
Second health condition: Diseases of the musculoskeletal system and connective tissue	0.114	0.157

Continued

Table D.6 Continued

Variable	Provider A	Provider B
Second health condition: Injury, poisoning and certain other consequences of external causes	-0.386	0.438
Other second health condition:	-0.137	-0.169*
ESA assessment	-0.546*	-0.189
ESA Support Group	1.280	0.216
ESA WRAG	-0.378	-0.051
Lone parent	-0.031	-0.065
Black	-0.013	-0.744
Asian	0.348	-0.124
Mixed	0.030	0.275
Other	-0.915	-0.847
No information on ethnicity	-0.400	-0.562*

Table D.7 sets out the regressions results for both providers for at least a week spent off out-of-work benefits. The treatment variable for Provider A is positive, but not statistically significant while that for Provider B is also positive, but statistically significant at the ten per cent level.

Other interesting regressions results are that being male has a positive and statistically significant impact on the chances of spending at least a week off out-of-work benefits for both the Provider B (at five per cent level) and Provider A (at 1 per cent level) cases. Being on out-of-work benefits for 4-5 years (significant at the ten per cent level for Provider A and at the five per cent level for Provider B) and 5-6 years (at the five per cent level for both providers) prior to participation have negative impacts on spending at least a week off out-of-work benefits.

Being aged 30-60 has a negative and statistically significant impact (at the 1 per cent level) on an individual's chances of being off out-of-work benefits for at least one week for Provider B WW clients and their comparison group. For Provider A clients, a narrower age range, 40-60, has a negative impact on an individual's chances of being off out-of-work benefits for at least one week (significant at least the five per cent level).

Table D.7 Early impact on at least one week off out-of-work benefits, by provider

Variable	Provider A	Provider B
(Intercept)	-0.212	-0.834
Treatment	0.030	0.154*
Employment rate	-0.081	-0.158
FT hourly wage rate	-0.019	0.0498
Male	0.414***	0.2140**
Not receiving DLA	0.177	-0.028
On out-of-work benefits for 1-2 years	-0.078	0.301
On out-of-work benefits for 2-3 years	-0.550	-0.337
On out-of-work benefits for 3-4 years	-0.468	-0.206
On out-of-work benefits for 4-5 years	-1.321*	-1.081**

Continued

Table D.7 Continued

Variable	Provider A	Provider B
On out-of-work benefits for 5-6 years	-2.125**	-1.430**
On out-of-work benefits for more than 6 years	-0.240	-0.561
Age 30-40	-0.274	-0.523***
Age 40-45	-0.390**	-0.544***
Age 45-50	-0.514***	-0.618***
Age 50-55	-0.670***	-0.759***
Age 55-60	-1.099***	-0.791***
Age 60-70	0.0049	1.275***
Primary health condition: Diseases of the nervous system	-0.733**	-0.256
Primary health condition: Diseases of the circulatory or respiratory system	-0.220	0.115
Primary health condition: Diseases of the musculoskeletal system and connective tissue	-0.044	-0.033
Primary health condition: Injury, poisoning and certain other consequences of external causes	0.160	0.402*
Other primary health condition:	-0.171	-0.090
Second health condition: Diseases of the nervous system	0.162	-0.670*
Second health condition: Diseases of the circulatory or respiratory system	0.221	0.209
Second health condition: Diseases of the musculoskeletal system and connective tissue	0.132	0.148
Second health condition: Injury, poisoning and certain other consequences of external causes	-0.302	0.491
Other second health condition:	-0.139	-0.189*
ESA assessment	-0.428	-0.208
ESA Support Group	1.399	0.253
ESA WRAG	-0.316	-0.068
Lone parent	-0.052	-0.027
Black	-0.046	-0.676
Asian	0.446	-0.056
Mixed	0.130	0.347
Other	-1.291*	-0.783
No information on ethnicity	-0.309	-0.486

Table D.8 set out the regressions results for both providers for 13 weeks or more spent off out-of-work benefits. The treatment variables for both providers are negative but not statistically significant.

Other interesting regressions results include that the intercept variable is negative and significant at the five per cent level for Provider B, indicating that here the bundle of base case characteristics in this case have a negative impact on an individual's chance of spending 13 weeks or more off out-of-work benefits. This is not the case for Provider A.

A higher employment rate has a positive and significant (at the ten per cent level) impact on an individual's chance of spending 13 weeks or more off out-of-work benefits for Provider B, but again this is not the case for Provider A. For Provider B being aged 30 to 60 has a negative and statistically significant impact (at the 1 per cent level) on an individual's chances of spending 13 weeks or more off out-of-work benefits. For Provider A, the impact of age is only statistically significant (at the 1 per cent level) and negative for those aged 50-60. Finally, some differences by ethnicity emerge between the two providers. In the case of Provider A, people of black ethnic origins are more likely to spend 13 weeks off benefit (significant at the five per cent level) while those of mixed ethnic origins are also more likely to spend 13 weeks off benefit (significant at the ten per cent level). Both of these impacts are relative to the base case of being white. There are no differences by ethnicity in the case of Provider B.

Table D.8 Early impact on at least 13 weeks off out-of-work benefits, by provider

Variable	Provider A	Provider B
(Intercept)	-1.214	-2.843**
Treatment	-0.080	-0.005
Employment rate	2.628	2.679*
FT hourly wage rate	-0.113	0.002
Male	0.318	-0.063
Not receiving DLA	0.058	-0.092
On out-of-work benefits for 1-2 years	-0.141	0.549
On out-of-work benefits for 2-3 years	-1.138	-0.535
On out-of-work benefits for 3-4 years	-0.944	-0.364
On out-of-work benefits for 4-5 years	-1.830**	-0.969
On out-of-work benefits for 5-6 years	-2.332*	-0.553
On out-of-work benefits for more than 6 years	-12.954	0.240
Age 30-40	-0.276	-0.528***
Age 40-45	-0.324	-0.568***
Age 45-50	-0.443	-0.568***
Age 50-55	-1.052***	-0.699***
Age 55-60	-1.241***	-0.820***
Age 60-70	1.035	1.732***
Primary health condition: Diseases of the nervous system	-0.616	0.042
Primary health condition: Diseases of the circulatory or respiratory system	0.650	0.315
Primary health condition: Diseases of the musculoskeletal system and connective tissue	-0.063	0.157
Primary health condition: Injury, poisoning and certain other consequences of external causes	0.058	0.525
Other primary health condition:	-0.040	0.160
Second health condition: Diseases of the nervous system	0.376	-0.754

Continued

Table D.8 Continued

Variable	Provider A	Provider B
Second health condition: Diseases of the circulatory or respiratory system	0.345	0.475
Second health condition: Diseases of the musculoskeletal system and connective tissue	0.116	0.035
Second health condition: Injury, poisoning and certain other consequences of external causes	-1.146	0.510
Other second health condition:	-0.178	-0.146
ESA assessment	-0.734	-0.642**
ESA Support Group	0.923	-0.217
ESA WRAG	-0.377	-0.206
Lone parent	-0.046	-0.205
Black	0.953**	0.039
Asian	0.389	-0.123
Mixed	0.820*	0.645
Other	-0.064	-0.205
No information on ethnicity	-0.258	-0.386

Table D.9 sets out the regressions results for both providers respectively for 26 weeks or more spent off out-of-work benefits. The treatment variables for both providers are negative but not statistically significant.

In the case of Provider A, only three variables are statistically significant at least the ten per cent level, relating to two health conditions and being in the ESA Support Group. For Provider B, more variables are statistically significant, including the intercept, which has a negative impact at the 5 per cent significance level, indicating that the bundle of characteristics in the base case have a statistically significant and negative impact on an individual's chances being off benefits for 26 weeks or more. Being aged 40-45 and 55-60 both have negative impacts on an individual's chances being off benefits for 26 weeks or more, while being aged 60-70 has a positive impact on an individual's chances of being off benefits presumably reflecting retirement.

Table D.9 Early impact on at least 26 weeks off out-of-work benefits by provider

Variable	Provider A	Provider B
(Intercept)	-23.154	-5.275**
Treatment	-0.197	-0.007
Employment rate	2.136	1.074
FT hourly wage rate	0.043	0.048
Male	0.109	-0.107
Not receiving DLA	0.159	0.135
On out-of-work benefits for 1-2 years	17.839	0.693
On out-of-work benefits for 2-3 years	16.196	-0.362
On out-of-work benefits for 3-4 years	16.669	-0.031
On out-of-work benefits for 4-5 years	16.540	-0.123

Continued

Table D.9 Continued

Variable	Provider A	Provider B
On out-of-work benefits for 5-6 years	-0.220	-1.072
On out-of-work benefits for more than 6 years	0.529	-13.271
Age 30-40	-0.269	-0.422
Age 40-45	-0.439	-0.715*
Age 45-50	-0.575	-0.165
Age 50-55	-0.774	-0.331
Age 55-60	-17.041	-1.135**
Age 60-70	1.358	2.426***
Primary health condition: Diseases of the nervous system	0.133	0.093
Primary health condition: Diseases of the circulatory or respiratory system	0.725	0.136
Primary health condition: Diseases of the musculoskeletal system and connective tissue	0.205	0.525
Primary health condition: Injury, poisoning and certain other consequences of external causes	0.187	0.036
Other primary health condition:	0.962**	0.286
Second health condition: Diseases of the nervous system	1.663*	0.650
Second health condition: Diseases of the circulatory or respiratory system	-16.292	0.958*
Second health condition: Diseases of the musculoskeletal system and connective tissue	-0.547	0.317
Second health condition: Injury, poisoning and certain other consequences of external causes	0.609	0.997
Other second health condition:	0.538	0.340
ESA assessment	0.137	0.003
ESA Support Group	2.897**	2.035**
ESA WRAG	0.484	0.479
Lone parent	0.136	-0.509
Black	-0.213	-13.137
Asian	0.255	-1.670
Mixed	0.488	0.835
Other	-16.668	0.189
No information on ethnicity	-0.610	-0.679***

The low incidence of periods off out-of-work benefits exceeding 26 weeks meant that it was not possible to successfully model these outcomes separately by provider.

D.3 Weeks in work and weeks off out-of-work benefits

As well as considering the impact of WW on job entry, job sustainment, exit from out-of-work benefits and the extent to which time off benefit is sustained we also investigated estimates of the impact in terms of additional weeks in work and weeks off benefit. Our analysis in this regard is set our here.

D.3.1 Methodology for weeks in work and weeks off out-of-work benefits

We first estimated a linear regression similar to the equation above that was used for our logistic regression results. Instead of the dependent variable being the natural log of the odds ratio, it was simply the number of weeks in work/number of weeks off out-of-work benefit. When we ran these regressions, we received a statistical warning that these models were misspecified.

Misspecification can lead to biased estimates both of the regression coefficients and the standard errors associated with them. Hence, misspecification means we risk making erroneous conclusions about both the magnitude and even sign of the treatment effects for WW and the other explanatory variables and whether or not these variables are statistically significant or not. This finding is not surprising given only 4.7 per cent of treated and final matched comparison group (see Table 4.3) spent any time in work and 21.6 per cent of treated and 23.1 per cent of final matched comparison group (see Table 4.2) spent any time off out-of-work benefits. Hence, the distributions of the two dependent variables, weeks in work and weeks off benefit, are both likely to be highly non-normal.

We then tried a standard Box-Cox transformation of the weeks in work and weeks off benefit variables. This approach transforms the original data, Y, to YI, with the value of I, lambda, chosen iteratively to find the best value between -5 and 5 which makes the transformed data best fit the normal distribution. For both weeks in work and weeks off out-of-work benefits, the value of lambda chosen iteratively was outside the -5 to 5 range, which is conventionally seen as the acceptable range for this parameter to take.

Hence, we further investigated other methods, including Poisson and Negative Binomial approaches. We finally opted for a Zero Inflated Negative Binomial (ZINB) regression approach. The ZINB approach explicitly models zero and non-zero data using separate processes. The approach is based on the idea that there the number of zero responses is excessive because some zero responses are ‘certain zeros’ while other zero outcomes could in other circumstances have been non-zero. In the context of WW, this could be because some participants had no real interest in moving into work, for various reasons, while others were interested but did not manage to move into work. Both categories are zero outcomes with the former group being ‘excess zeros’.

D.3.2 Results for weeks in work and weeks off out-of-work benefits

The results of the ZINB regressions for weeks in work are shown in Table D.10. As the ZINB approach explicitly models the zero and non-zero responses separately, it produces two sets of regression outputs. The second column of Table D.10 shows the results for weeks in work, while the third column shows the results for excess zero outcomes. The second column of Table A4.10 indicates that the treatment effect is positive and statistically significant at the five per cent level. The way to interpret the coefficient on the treatment variable (0.252) is that it is the natural log of the expected number of weeks that the treated WW participants spend in work relative to the matched comparison group. This is a multiplicative effect so the results indicate that treated WW participants spend 1.286 (= $e^{0.252}$) times the time spent in work that the comparison group do holding all other variables constant. Treated participants who enter work spend on average 20.53 weeks in work. Hence weeks in work for hypothetical identical non-participants in Greater Manchester would have been 15.96 weeks in work (= 20.53/1.286)[27]. Hence, the estimated early impact of WW is to increase weeks in work for those entering work by 4.57 weeks.

Other factors which had a positive and statistically significant impact, at least the ten per cent level, on weeks in work were the bundle of base case characteristics reflected in the intercept term, being aged 40-45, and diseases of the musculoskeletal system and connective tissue relative to the base case condition of mental health conditions. Factors which have a negative impact on weeks in work and were statistically significant at least the ten per cent level were: diseases of the circulatory or respiratory system relative to the base case condition of mental health conditions and being of either Asian ethnic origins or where we had no information on ethnicity relative to the base case of being white.

[27] Our actual final matched comparison group who entered work spent on average 17.07 weeks in work. As our comparison group were on average located in more buoyant local labour markets than the treated group, the difference between this figure and the modelled untreated outcome of 1.11 can be interpreted as reflecting this local labour market impact.

Table D.10 Working Well early impact on weeks in work

Variable	Weeks in work	Zero weeks in work
(Intercept)	3.266***	4.623***
Treatment	0.252**	-0.084
Employment rate	0.541	-5.967***
FT hourly wage rate	-0.059	0.117**
Male	0.017	-0.234
Not receiving DLA	0.138	-0.129
On out-of-work benefits for 1-2 years	-0.268	0.009
On out-of-work benefits for 2-3 years	-0.505	0.717
On out-of-work benefits for 3-4 years	-0.409	0.581
On out-of-work benefits for 4-5 years	-0.422	0.416
On out-of-work benefits for 5-6 years	-0.421	0.776
On out-of-work benefits for more than 6 years	-0.592	-0.059
Age 30-40	0.075	0.799***
Age 40-45	0.378**	1.143***
Age 45-50	-0.028	0.834***
Age 50-55	0.225	0.917***
Age 55-60	-0.020	1.125***
Age 60-70	-0.110	1.220
Primary health condition: Diseases of the nervous system	0.036	-0.207
Primary health condition: Diseases of the circulatory or respiratory system	-0.950***	-0.188
Primary health condition: Diseases of the musculoskeletal system and connective tissue	0.224	-0.320
Primary health condition: Injury, poisoning and certain other consequences of external causes	-0.470	0.963*
Other primary health condition:	0.181	-0.138
Second health condition: Diseases of the nervous system	0.191	1.640
Second health condition: Diseases of the circulatory or respiratory system	0.403	0.098
Second health condition: Diseases of the musculoskeletal system and connective tissue	0.523*	0.458
Second health condition: Injury, poisoning and certain other consequences of external causes	-0.120	0.047
Other second health condition:	0.051	0.070
Lone parent	-0.066	-0.068
Black	0.057	-0.781
Asian	-0.618*	0.548
Mixed	0.095	0.026
Other	0.573	0.919
No information on ethnicity	-1.073***	0.326
Log(theta)	0.724***	-

The third column of Table D.10 indicates that the treatment variable does not have a statistically significant impact on whether an individual enters work or not even though as indicated by the second column of Table D.10, participation in WW does have a statistically significant impact in terms of increasing time in work if an individual enters work. Other results shown in the third column of Table D.10 are consistent with the two processes of zero outcomes (the obverse of entering work) and weeks in work being rather different processes. The two local labour market variables, the employment rate and full-time median hourly earnings are statistically significant, at 1 per cent and 5 per cent respectively. A higher local employment rate reduces an individual's chances of spending no time in work, while higher local median full-time pay increases an individual's chances of spending no time in work. These results are consistent with our earlier logistic regression results. The age variables also play a much more prominent role in influencing whether or not an individual has a zero work outcome than the length of time they spend in work if they enter work. Relative to the base case of being aged under 30, being aged 30-60 has a significant positive impact on whether an individual spends zero time in work. All the age variables 30-40 to 55-60 are statistically significant at the 1 per cent level.

The second column of Table D.11 indicates that the treatment variable has a negative but not statistically significant impact on weeks of benefit. Hence, WW does not appear to have an early impact on the length of time participants spend off out-of-work benefits. A higher local employment rate appears to increase the time spent off out-of-work benefits. This impact is significant at the ten per cent level. Being aged 60-70 also increases the time an individual spends off out-of-work benefits reflecting retirement. This impact is significant at the 1 per cent level.

Table D.11 Working Well early impact on weeks off out-of-work benefit

Variable	Weeks off benefit	Zero weeks off benefit
(Intercept)	1.827***	1.368*
Treatment	-0.037	0.045
Employment rate	1.142*	-1.408*
FT hourly wage rate	-0.010	-0.004
Male	-0.061	-0.278***
Not receiving DLA	0.017	-0.001
On out-of-work benefits for 1-2 years	0.422	-0.124
On out-of-work benefits for 2-3 years	0.010	0.400
On out-of-work benefits for 3-4 years	0.055	0.286
On out-of-work benefits for 4-5 years	0.264	1.251***
On out-of-work benefits for 5-6 years	0.150	1.669***
On out-of-work benefits for more than 6 years	-0.275	0.098
Age 30-40	-0.018	0.456***
Age 40-45	-0.065	0.498***
Age 45-50	-0.105	0.511***
Age 50-55	-0.031	0.689***
Age 55-60	-0.006	0.812***

Continued

Table D.11 Continued

Variable	Weeks off benefit	Zero weeks off benefit
Age 60-70	0.817***	-1.038***
Primary health condition: Diseases of the nervous system	0.214	0.281
Primary health condition: Diseases of the circulatory or respiratory system	0.389**	0.154
Primary health condition: Diseases of the musculoskeletal system and connective tissue	0.010	0.002
Primary health condition: Injury, poisoning and certain other consequences of external causes	0.021	-0.338*
Other primary health condition:	0.161**	0.076
Second health condition: Diseases of the nervous system	0.092	0.345
Second health condition: Diseases of the circulatory or respiratory system	-0.130	-0.325
Second health condition: Diseases of the musculoskeletal system and connective tissue	-0.075	-0.100
Second health condition: Injury, poisoning and certain other consequences of external causes	0.453*	0.026
Other second health condition:	0.018	0.134
Lone parent	-0.070	-0.050
Black	0.116	0.112
Asian	-0.167	-0.131
Mixed	0.273	-0.175
Other	0.037	0.627
No information on ethnicity	-0.039	0.357*
Log(theta)	0.344***	-

The third column of Table D.11 also indicates that the treatment variable does not have a statistically significant impact on whether an individual spends zero time off out-of-work benefits. Hence, participation on WW does not appear to impact on whether or not an individual spends any time off out-of-work benefits.

Other results shown in Table D.11 are, as for weeks in work, consistent with the two processes of zero outcomes (not spending any time off out-of-work benefits) and weeks off out-of-work benefits being rather different processes. Having been on out-of-work benefits for 4-6 years prior to participation in WW has a positive and statistically significant at the 1 per cent level impact on an individual's chance of spending no time off out-of-work benefits. These variables do not impact significantly on time spent off benefit. The age variables again play a much more prominent role in influencing whether or not an individual has a zero off benefit outcome than the length of time they spend off benefit if they so exit. Relative to the base case of being aged under 30, being aged 30-60 has a significant positive impact on whether an individual spends zero time off benefit. All the age variables 30-40 to 55-60 are statistically significant at the 1 per cent level. In addition, being aged 60-70 has a significant negative impact on spending zero time off benefit, reflecting retirement.

D.3.3 Results for weeks off out-of-work benefits by provider

We also attempted to assess whether the impact of WW on weeks in work and weeks off out-of-work benefits varied between the two providers. The iterative optimisation process for weeks in work by provider failed to converge due to the small numbers in our data who enter work when this is split by provider. Hence, below we only report on our results for weeks off out-of-work benefits.

Table D.12 shows the results for weeks off benefit for the two providers, while Table D.13 shows the results for excess zero outcomes for both providers. Tables D.12 and D.13 indicate that the treatment effect is not statistically significant for either of the two providers for either weeks spent off benefit or for an individual's chances of having a zero outcome (not spending any time off out-of-work benefits). Hence, participation in WW, whether delivered by either of the two providers, does not appear to affect the time an individual spends off out-of-work benefits. Comparing the results shown in Tables D.12 against those in Tables D.13 suggests that the two processes which determine on the one hand weeks off benefit and on the other, whether an individual has a zero outcome (no weeks off benefit) are rather different. In the case of Provider A, no variable which has a statistically significant impact on weeks off benefit also has a statistically significant impact on whether an individual has a zero outcome and vice versa. In the case of Provider B, the only variable which has a statistically significant impact on both weeks off benefit and whether an individual has a zero outcome is being aged 60-70 relative to the base case of being aged under 30. This has a positive impact on weeks off benefit and a negative impact on an individual's chances of spending no time off out-of-work benefits.

In contrast, comparing Tables D.12 and D.13 shows reasonably similar processes for the two providers for the two outcomes of weeks off benefit and whether an individual has a zero outcome (no time off benefit). For both providers, the intercept, being aged 60-70, and having a disease of the circulatory or respiratory system had statistically significant impacts (at least the ten per cent level) on time spent off out-of-work benefits. While for zero outcomes, being male, having spent 4 to 6 years on out-of-work benefits prior to participation, and being aged between 40-45 and 55-60 all have statistically significant impacts at least the ten per cent level for both providers.

Table D.12 Working Well early impact on weeks off out-of-work benefit by provider.

Variable	Provider A	Provider B
(Intercept)	2.689***	1.614**
Treatment	-0.001	-0.101
Employment rate	1.186	1.791**
FT hourly rate	-0.065*	-0.014
Male	-0.076	-0.097
Not receiving DLA	0.022	-0.043
On out-of-work benefits for 1-2 years	0.534	0.308
On out-of-work benefits for 2-3 years	-0.236	-0.088
On out-of-work benefits for 3-4 years	-0.234	-0.060
On out-of-work benefits for 4-5 years	-0.091	0.078
On out-of-work benefits for 5-6 years	-1.102	0.222
On out-of-work benefits for more than 6 years	-3.184***	-0.019
Age 30-40	-0.067	0.001
Age 40-45	-0.003	-0.040
Age 45-50	-0.049	-0.056
Age 50-55	-0.200	0.096
Age 55-60	-0.070	-0.044
Age 60-70	1.159*	0.829***
Primary health condition: Diseases of the nervous system	0.254	0.195
Primary health condition: Diseases of the circulatory or respiratory system	0.590*	0.339*
Primary health condition: Diseases of the musculoskeletal system and connective tissue	-0.131	0.102
Primary health condition: Injury, poisoning and certain other consequences of external causes	-0.141	-0.057
Other primary health condition:	0.224	0.110
Second health condition: Diseases of the nervous system	0.307	0.037
Second health condition: Diseases of the circulatory or respiratory system	-0.324	-0.099
Second health condition: Diseases of the musculoskeletal system and connective tissue	-0.039	-0.071
Second health condition: Injury, poisoning and certain other consequences of external causes	-0.022	0.345
Other second health condition:	0.085	0.026
Lone parent	0.074	-0.068
Black	0.338	0.334
Asian	0.025	-0.154
Mixed	0.308	0.279
Other	-0.182	0.372
No information on ethnicity	-0.190	0.122
Log(theta)	0.373***	0.286***

Table D.13 Working Well early impact on weeks off out-of-work benefits, whether zero weeks, by provider.

Variable	Provider A	Provider B
(Intercept)	0.586	0.846
Treatment	0.053	-0.151
Employment rate	0.348	0.213
FT hourly wage rate	-0.004	-0.053
Male	-0.405***	-0.209
Not receiving DLA	-0.223	0.006
On out-of-work benefits for 1-2 years	0.091	-0.286
On out-of-work benefits for 2-3 years	0.488	0.328
On out-of-work benefits for 3-4 years	0.390	0.210
On out-of-work benefits for 4-5 years	1.237*	1.069
On out-of-work benefits for 5-6 years	2.031*	1.474
On out-of-work benefits for more than 6 years	-12.511	0.577
Age 30-40	0.274	0.543
Age 40-45	0.384**	0.548
Age 45-50	0.468**	0.558
Age 50-55	0.696***	0.791
Age 55-60	1.145***	0.816
Age 60-70	0.067	-1.246
Primary health condition: Diseases of the nervous system	0.621*	0.242
Primary health condition: Diseases of the circulatory or respiratory system	0.274	-0.059
Primary health condition: Diseases of the musculoskeletal system and connective tissue	-0.036	0.069
Primary health condition: Injury, poisoning and certain other consequences of external causes	-0.151	-0.420
Other primary health condition:	0.155	0.099
Second health condition: Diseases of the nervous system	-0.088	0.694
Second health condition: Diseases of the circulatory or respiratory system	-0.323	-0.281
Second health condition: Diseases of the musculoskeletal system and connective tissue	-0.123	-0.175
Second health condition: Injury, poisoning and certain other consequences of external causes	0.319	-0.448
Other second health condition:	0.157	0.190
Lone parent	0.058	0.041
Black	0.150	0.724
Asian	-0.394	0.043
Mixed	-0.032	-0.319
Other	0.857	0.824
No information on ethnicity	0.365	0.516

References

Caliendo, M., Mahlstedt, R. and Mitnik, O. (2014). *Unobservable but unimportant? The influence of personality traits (and other usually unobserved variables) for the evaluation of labor market policies*. IZA Discussion Paper 1407. Available through: http://ftp.iza.org/dp8337.pdf

DWP, (2017). *Employment and Support Allowance: Eligibility*. Available through: https://www.gov.uk/employment-support-allowance/eligibility

Knight, G., *et al.* (2013). *Provider-led Pathways to Work: Net impacts on employment and benefit*. Department for Work and Pensions Working Paper No. 113. Available through: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/221223/WP113.pdf

SQW, (2015). *Evaluation of Working Well Programme. Interim Report, A Report for the Greater Manchester March 2015* (not available on line).

SQW, (2016). *Working Well Annual Report, Evaluation of Working Well Programme, Interim Report*. Available through: https://www.greatermanchester-ca.gov.uk/downloads/file/215/working_well_annual_report_2016

Stafford, B., *et al.* (2007). *New Deal for Disabled People: Third synthesis report – key findings from the evaluation*. Department for Work and Pensions Research Report No. 430. Available through: http://www.york.ac.uk/inst/spru/pubs/pdf/rrep430.pdf